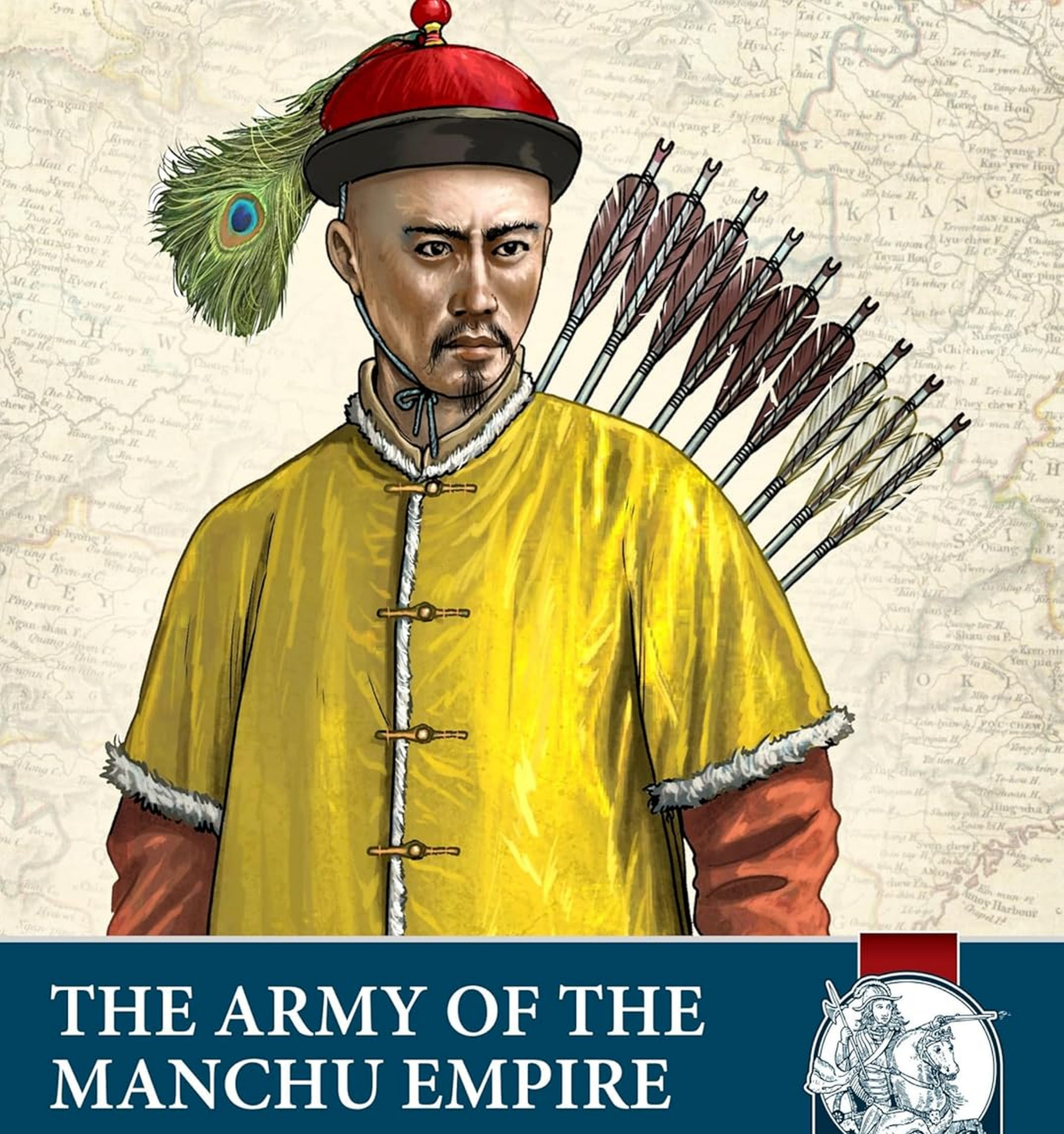

THE ARMY OF THE MANCHU EMPIRE

The Conquest Army and the Imperial Army of Qing China, 1600–1727

MICHAEL FREDHOLM VON ESSEN

Century of the Soldier
1618-1721
No.116

THE ARMY OF THE MANCHU EMPIRE

The Conquest Army and the Imperial Army of Qing China, 1600–1727

Michael Fredholm von Essen

'This is the Century of the Soldier', Fulvio Testi, Poet, 1641

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Dedicated to Margareta Mårtens (1923–2013), Librarian, Museum of Far Eastern Antiquities, Stockholm; Mamoru Nakamura (1935–2023), Librarian, Far Eastern Library, Stockholm; and Per-Olow Leijon (1938–2011), Senior Curator, China and Japan, Museum of Far Eastern Antiquities and National Museum of Ethnography, Stockholm.

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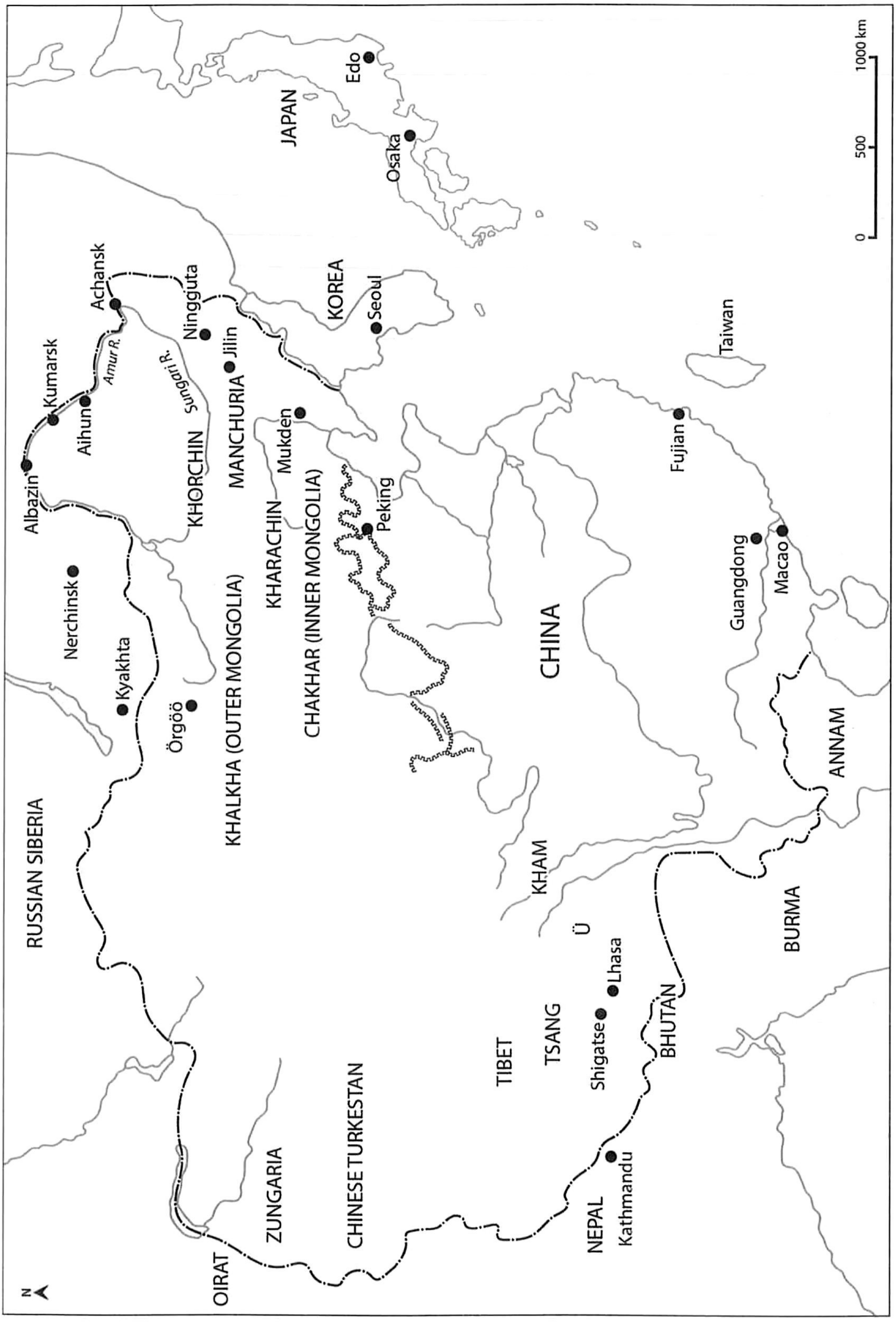
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Ningguta
Jilin
MANCHURIA
Mukden
KHARACHIN
KHALKHA (OUTER MONGOLIA)
CHAKHAR (INNER MONGOLIA)
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NEPAL
Kathmandu
CHINESE TURKESTAN
ZUNGARIA
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N

The Manchu Empire.

Introduction

This book describes and analyses the Manchu, or Qing, army in all its aspects. The emphasis lies on the Qing army in the seventeenth and early eighteenth centuries because this was the time when the Manchu military system developed its own characteristics and reached maturity. Furthermore, having achieved this and, in the process, conquered one of the largest empires ever gained, the Qing army changed but little before 1851, when the Taiping War marked the beginning of the end of the Qing empire, as well as changed the character of the Manchu military system.

In its heyday, the Manchu army achieved significant victories and conquered vast territories, chief among them Ming China. The Manchus consistently achieved victories against numerically superior Ming armies. The same went for Korea, which submitted to the Qing state even before Ming China did. The Manchu military operated as combined-arms armies, successfully combining the various strengths of cavalry, infantry, and artillery. The Manchu army was, for cultural and historical reasons, particularly strong in cavalry, as could be expected from a power that had incorporated numerous Mongols in its ranks. On the strategic level, this intimate level of cooperation with steppe nomads and the deep understanding thereby gained of steppe politics and political systems of nomad states enabled the Qing state to extend its borders farther to the north and west than any previous sedentary ruler of China. Qing armies conquered Tibet and vast territories in Inner Asia, both of which they incorporated into the Qing empire.

In the tropical countries to the south of China, the Qing army experienced both victories and serious losses, especially to disease. In this, they showed similarities with the various European armies of the time. The Portuguese colonial soldiers in southern China proved no obstacle to Qing conquests.

Perhaps the clearest evidence of the versatility of the Qing military system was its successful containment of the very active Muscovite Russian expansion then underway. The two Treaties of Nerchinsk in 1689 and Kyakhta in 1727 delimited the Manchu–Russian border exactly where the Manchus wanted it to be, and the border selected by the Manchus remained unchallenged until the second half of the nineteenth century.[1] Indeed, the border delimited at that time forms the backbone of the national borders of the region to this day.

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[1] Modern-day Russia was commonly known as 'Muscovy' before the late seventeenth-century reforms introduced by Tsar Peter the Great. However, there was also a spatial dimension to the name 'Russia' since its ruler formally was known as 'Tsar over the whole of Russia' (*Tsar' vseya Rusi*). Tsar Peter's reign began in 1689, the very same year in which Muscovy's border in the

An attempt has been made to include in this book Manchu and Chinese and, in a few cases, Mongolian, Tibetan, and Korean terms where a direct English translation is inappropriate or unnecessarily vague. In those cases where only one term is given, it is Chinese. The Qing empire had multiple official languages, including Manchu, Chinese, and Mongolian. From the second half of the eighteenth century, many texts were simultaneously issued in Manchu, Chinese, Mongolian, Tibetan, and the Turkic language of many Central Asian Muslims written in Arabic script that is often referred to as 'Uighur'. For this reason, the author has, whenever possible, included the original form of titles and offices in at least Manchu and Chinese.

Except for a few well-known city names such as Peking (Beijing), Nanking (Nanjing), Canton (Guangzhou), and Hong Kong (Xianggang), the author has, with some regret, followed the modern pinyin system of romanisation of Chinese rather than the older, and now generally supplanted, Wade–Giles romanisation system. This is regrettable, as the Wade–Giles system, unlike pinyin, indicates pronunciation in a manner that is far easier to understand for those who do not speak Chinese. Few Chinese, in any case, seem to be very familiar with pinyin, which was developed by Chinese scholars more as an exercise in independence from what they would have referred to as colonial oppression of the past, and from the Republic of China in Taiwan, which retained Wade–Giles, than practicability in writing their language in Roman letters. There were indeed unfulfilled dreams in the People's Republic of China that everybody should switch to pinyin as part of the modernisation process. Virtually all foreign academics today have adopted the pinyin system, which is the reason why this author has done likewise. So is, for instance, the name 'Qing' in older works instead usually spelled 'Ch'ing'. The author has not, however, used the pinyin forms of Manchu and Mongolian names (unless when unable to find the name in its original form) since Manchu (and to some extent Mongolian) has a perfectly usable romanisation system of its own. Manchu is now less well known than it used to be, so there might still be discrepancies. So is, for instance, the Manchu name 'Nurgaci' in many English works rendered 'Nurhaci' or 'Nurhachi'.

It should also be noted that an emperor had not only his personal name but also an auspicious reign title, chosen upon his assumption of power. So is, for instance, Emperor Xuanye better known as 'the Kangxi emperor', meaning the emperor of the Kangxi period, or 1662–1722.

Military ranks and similar terminology have been translated according to a system that is not necessarily better than those used in other works, at present or in the nineteenth century, but which at least should be more consistent. The appropriate tables of military ranks will explain the system used in this book, as well as give the original Chinese and Manchu terms for

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east with the Qing empire was delimited in the Nerchinsk Treaty, through which old Muscovy indeed could be said finally to have become modern Russia. For simplicity, the term 'Russian' will be used throughout this book, including the period before Tsar Peter.

reference. Measurements have, whenever possible, been recalculated into the metric system.

Korean is rendered according to the official, revised romanisation system that South Korea adopted in 2000. It diverges from the traditional George M. McCune–Edwin O. Reischauer romanisation system, which remains in common use in North America. For this reason, the Korean state traditionally called 'Chosŏn' according to the McCune–Reischauer system is here instead transliterated as 'Joseon' according to the revised official system.

It is always pleasant for an author to receive positive input and valuable new materials in response to a published book. Among those who sent useful materials in response to previous editions of this work, the author particularly wishes to thank Yang Saeam and Aleksey Pastukhov.[2]

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[2] The present book is the much-expanded third edition of a volume that the author first published in January 1997 as a limited-edition work with the title '*The Army of the Manchu Empire and Qing China, 1600-1850*'. In 2009, the Pike and Shot Society took the book under its wings and kindly published an extended edition with the title '*Eight Banners and Green Flag: The Army of the Manchu Empire and Qing China, 1600-1850*'. The present edition, by Helion & Company, enabled the author to add yet more materials as well as colour artwork.

Chronology

Birth of the Manchu Empire

1559 – Birth of Nurgaci, the founder of the Manchu empire.

1599–1613 – Annexation of the rival Hada, Hoifa, and Ula tribes as well as the Khorchin Mongols.

1616 – Nurgaci proclaims himself khan and renounces fealty to Ming China.

1618 – Nurgaci proclaims the Jin ('golden') polity.

1619 – Nurgaci defeats a Ming–Korean army at Mt Sarhū and overthrows the rival Yehe tribe.

1621 – Nurgaci expels the Ming from the Liao basin and renames the provincial capital 'Mukden'.

1625 – Nurgaci makes Mukden his capital.

1626 – Death of Nurgaci.

1627 – Hung Taiji, Nurgaci's son, invades Korea, which agrees to transfer its tributary status from Ming to Jin.

1629 – Hung Taiji for the first time invades Chinese territory south of the Great Wall.

1631 – Hurka tribe submits.

1634 – Chakhar Mongols submit.

1636 – Hung Taiji proclaims the Qing ('pure') dynasty of the Manchu empire; soon after, he invades Korea, which had retained its recognition of Ming China.

1637 – Korea submits and accepts tributary status to Qing.

1640 – Solon tribe submits.

1643 – Death of Hung Taiji.

Invasion of China and Clashes with Russia and Western Mongols

1644 – The Ming emperor commits suicide when a bandit seizes Peking; in response, Manchu forces under the regent Dorgon enter China and capture Peking. War against Ming loyalists begins.

1652–1686 – Clashes with Russians in the Amur region.

1662 – Last Ming resistance in mainland China ceases; the Qing Kangxi emperor assumes the throne.

1673–1681 – Revolt of the Three Feudatories.

1683 – Taiwan submits.

1688–1697 – War against the western Oirat Mongols under Galdan, who is defeated by the Kangxi emperor.

1689 – The Kangxi emperor imposes the Treaty of Nerchinsk on Russia.

1691 – Khalkha Mongols submit; all eastern Mongols are henceforth under Qing rule.

1705 – The Qing empire backs a coup in Tibet.

1717 – Oirat Mongols directed by Galdan's nephew Tsewang Rabdan invade Tibet and seize Lhasa.

1718 – A Qing army sent to Tibet is decisively defeated by the Oirat Mongols.

1720 – A second Qing invasion of Tibet expells the Oirat Mongols; Qing garrisons are established in Tibet.

1723–1724 – Kokonor (Qinghai) Mongols revolt; fearful of possible Oirat involvement, Qing forces put down the revolt.

1727 – The Treaty of Kyakhta between Qing and Russia confirms Qing power in the Amur region.

1727–1728 – Tibetan civil war; fearful of possible Oirat involvement, Qing forces restore order.

1729 – Large-scale preparations for war against Oirat Mongols.

1731 – A Qing army is decisively defeated by the Oirat Mongols of Galdan Tseren, Tsewang Rabdan's son.

1749–1750 – Renewed unrest in Tibet; Qing forces again move in to restore order.

1755–1759 – Qing invasion of Turkestan (modern-day Xinjiang); Oirat Mongols are defeated and largely exterminated.

Active Border Defences and Suppression of Internal Revolts

1767–1770 – Qing invasion of Burma; Qing forces are defeated, but a treaty is concluded.

1786–1788 – Revolt in Taiwan.

1788–1789 – Qing invasion of Annam (Vietnam); Qing forces are again defeated, but a treaty is concluded.

1792 – In response to a Gurkha invasion of Tibet, a Qing–Tibetan army successfully invades Nepal.

1793 – Qing officers reform the Tibetan military, which is tasked with the protection of the empire's border against the Indian subcontinent.

1796–1804 – White Lotus Rebellion.

1826–1835 – Revolt by Muslim groups in Turkestan.

1839–1842 – The Opium War against Britain ends in the Treaty of Nanking; the Qing empire cedes Hong Kong to Britain and opens several ports to trade.

1850–1872 – The Miao revolt.

1851–1866 – Taiping War; first attempts at military reform and modernisation.
1853–1868 – Nian Rebellion.
1855–1873 – Muslim revolts in several provinces.
1856–1860 – War against Britain and France (Arrow War); Peking is seized by British and French armies.
1857 – Tibetans decide against military reform and retain existing Tibetan army unchanged.
1862 – Reform of Qing naval forces into the empire's first steam navy.
1871 – Russian soldiers seize Ili following a Muslim revolt.
1881 – Russian soldiers withdraw from Ili upon the return of a Qing army.
1884–1885 – Undeclared and largely inconclusive war with France (Sino-French War).

Decline and Fall of the Manchu Empire

1894–1895 – The Sino-Japanese War ends in the Treaty of Shimonoseki; the Qing empire cedes Taiwan and other territories to Japan and recognises the independence of Korea.
1898–1901 – The Boxer Rising and Boxer War.
1904–1905 – British invasion of increasingly independent Tibet (the Younghusband Mission).
1911 – Outbreak of the Chinese Republican Revolution; Mongols declare independence.
1912 – The abdication of the Qing emperor signifies the fall of the Qing dynasty; in Tibet, the Dalai Lama assumes personal rule.

1

The Manchu Empire

Nurgaci and the Early Manchu State

The founder of the Manchu state, Nurgaci (1559–1626), began his career as a minor chieftain among the Jianzhou Jurchen, a Tungusic tribe north of the Yalu River and thereby on the eastern border of the region beyond the Great Wall held by Ming China and known in Chinese as 'Liaodong'.[1]

Nurgaci's people were a loose confederation of perhaps seven chiefly sedentary tribes living in fortified homesteads and small villages, descended from the medieval imperial Jurchen. At the time of the death of his father, Taksi, and grandfather Giocangga at the hands of Ming soldiers in 1582, Nurgaci commanded a mere 130 men. Of these, apparently only 13 had complete sets of armour.[2] In 1584, he is recorded as having commanded no more than 500 cavalry and infantry.[3] However, he controlled a strategic position on a frontier where his people could learn Chinese and Korean ways and yet remain outside direct subjugation to Chinese rule. In addition, they could benefit from the trade in valuable regional specialities such as sable and other furs, pearls, ginseng, and silver. Furthermore, Nurgaci could take advantage of the Ming need to deal with leaders north of the border recognised by the Ming empire. The Ming recognised Nurgaci as his father's successor in 1583.

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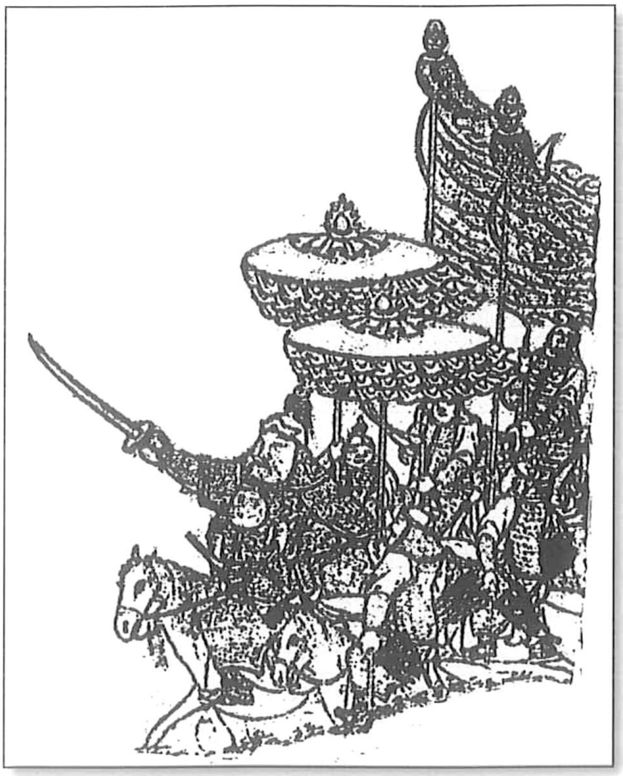
[1] Pamela K. Crossley, *The Manchus* (Oxford: Blackwell, 1997), pp.208–09, 212. On the Jurchen and early Manchus, see also Willard J. Peterson (ed.), *The Cambridge History of China: The Ch'ing Dynasty to 1800* (Cambridge: Cambridge University Press, 2002), vol. 9, part 1, pp.9–11, 20–27.

[2] See, for example, Ch'en Wen-shih [Chen Wenshi], 'The Creation of the Manchu Niru', in Pei Huang (ed.), *The Early Ch'ing Dynasty: State and Society, 1601-1722*, in *Chinese Studies in History*, 14:4 (Summer 1981), p.11; Crossley, *Manchus*, p.51.

[3] Ch'en, 'Creation', p.25.



Nurgaci, accompanied by parasol- and standard-bearers. (*Taizu shilutu*)

Nurgaci – according to eye-witnesses over six feet tall, intelligent and energetic and 'neither fat nor thin, in physique strong and erect, nose straight but large, face long and rather dark' – soon began the work to subdue and organise the neighbouring tribesmen.[4] Within a few years, he had established a small state near the Chinese border and was, from 1586, recognised as *beile* (lord or headman) by the Jurchen.[5]

The real rise of Nurgaci's power began with the Japanese invasion of Korea in 1592. Nurgaci volunteered a small force to the Ming for the Korean War of 1592–1598. By provisioning the commissariat of the Chinese army sent to Korea in response to the invasion, he acquired a fortune in silver, an armament industry, and a retinue of loyal followers. By 1595, Nurgaci was the undisputed master of southern Manchuria and was on his way to developing a new, more coherent tribal identity for his followers. In 1599, Nurgaci's scholars even developed a national writing system for the Manchu language.[6] Northern Manchuria, however, remained under the control of what the Chinese referred to as the 'Haixi' or 'Hūlun' confederation of the Hada, Yehe, Hoifa, and Ula tribes. In the years 1599–1601, Nurgaci annexed the Hada tribe of north-western Manchuria. In 1606, the Khorchin Mongols acknowledged Nurgaci as their khan. In 1607, he destroyed the Hoifa of north-eastern Manchuria. In 1610, large tribal groups from the valleys of the Ussuri and Hurka Rivers joined Nurgaci's army. In 1613, Nurgaci assumed control over the Ula of northern Manchuria, a Tungusic tribe deeply influenced by Mongol culture.[7]

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[4] Pamela K. Crossley, *A Translucent Mirror: History and Identity in Qing Imperial Ideology* (Berkeley: University of California Press, 1999), p.171, and *Manchus*, p.57.

[5] On Nurgaci, see, for example, Thomas J. Barfield, *The Perilous Frontier: Nomadic Empires and China, 221 BC to AD 1757* (Oxford: Blackwell, 1992), pp.251–58; Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.27–51.

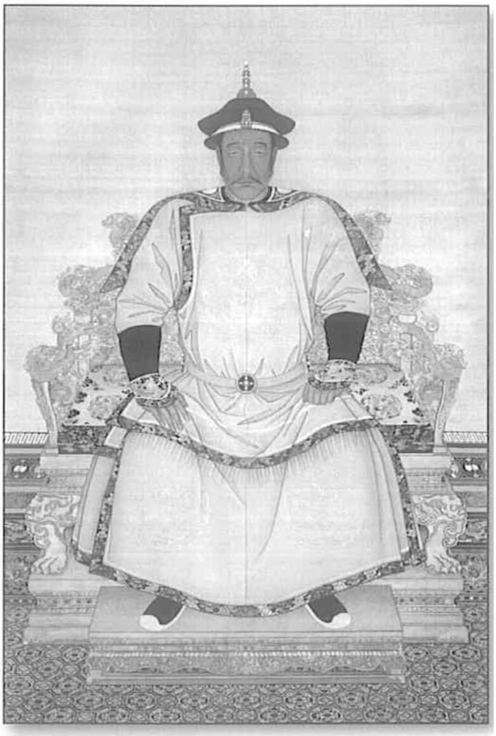
[6] Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, p.28; Evelyn S. Rawski, *The Last Emperors: A Social History of Qing Imperial Institutions* (Berkeley: University of California Press, 1998), p.36. Previously, Mongolian had been used as written language. The Manchu writing system was further improved upon in 1632.

[7] See, for example, Frederic Wakeman Jr, *The Great Enterprise: The Manchu Reconstruction of Imperial Order in Seventeenth-Century China* (Berkeley: University of California Press, 1985), vols 1–2, p.53; Crossley, *Manchus*, pp.52, 62, and *Translucent Mirror*, p.208 n.85. The Mongol-influenced Tungusic tribes fielded both cavalry and foot soldiers. When an Ula noble known as Laba surrendered to Nurgaci in the 1590s, he brought with him 20 fully armed cavalrymen, 100 warhorses (that is, five horses per cavalryman), and 120 foot soldiers.

In 1616, Nurgaci renounced fealty to Ming China, proclaiming himself khan (Manchu: *han*) of the Jianzhou Jurchen. In 1618, he proclaimed the Jin ('golden') polity (Manchu: *Aisin*, with same meaning), so named after the twelfth-century Jin state in northern China established by the ancestors of the Jurchen, and formally declared war against the Ming. Raids into China soon followed. By then, it should be remembered, he had already spent more than 35 years and the greater part of his life in wars to unite the various tribes of modern-day Manchuria. In 1618, Nurgaci raised an army of 10,000 men (possibly a conventional rather than true figure) well supplied with horses and armour and took several border cities. In the following year, Nurgaci also defeated a major Chinese army, with a Korean auxiliary contingent, in several successive engagements at Mt Sarhū despite the fact that he simultaneously fought the Yehe, another Mongol-influenced Tungusic group, to the east. The Chinese, who outnumbered Nurgaci's men, foolishly decided to advance in four widely separated columns towards Nurgaci's capital. One reason may have been the difficult terrain, which made it difficult to bring up the Chinese artillery. Supply problems no doubt also played a part. In a single week, Nurgaci's mobile forces ambushed and defeated three of the Chinese columns in turn. The fourth withdrew. Soon after this battle, also in 1619, Nurgaci finally overthrew the Yehe of northern Manchuria.[8]

Nurgaci's army, organised into efficient units known as 'banners', was acquiring a warlike reputation. In May 1621, Nurgaci's army took Shenyang, the Ming provincial capital, and most of the former Ming province of Liaodong. Nurgaci renamed the city 'Mukden'. In 1625, he established his capital at Mukden, where he set up a civil administration based upon the Chinese model.[9]

In spring the following year, yet another incursion into China followed, but this time Nurgaci suffered his first and only serious military defeat. In late February, Nurgaci's army was repulsed at the siege of Ningyuan, a city defended with the help of modern artillery. He appears to have been wounded in the battle. On 30 September 1626, Nurgaci died, perhaps as a result of his wounds.[10]



Nurgaci. (Palace Museum, Peking)

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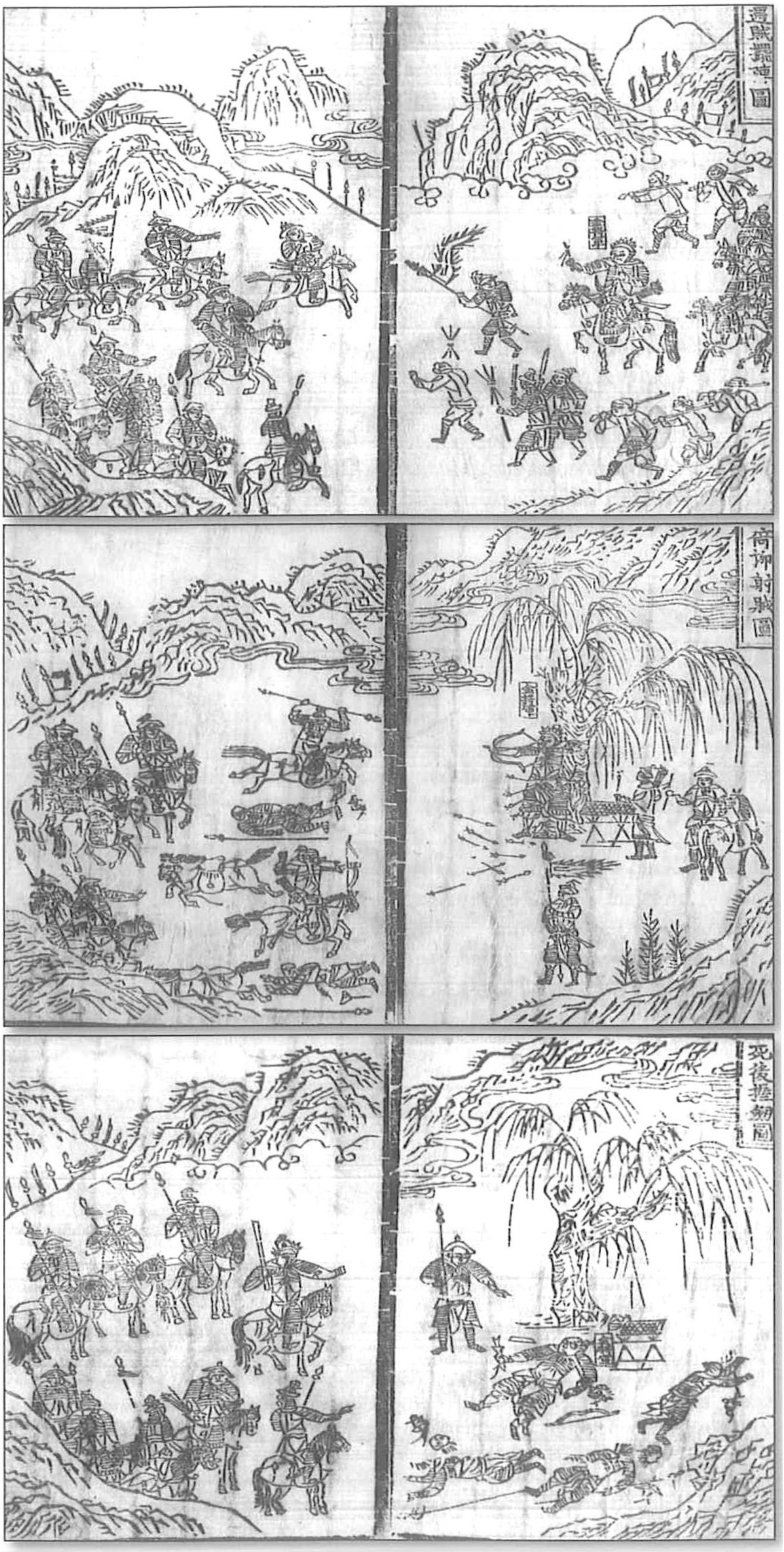
[8] See, for example, Crossley, *Manchus*, pp.67–71, 209, 212; Wakeman, *Great Enterprise*, vols 1–2, p.53. The dynasty established by Nurgaci is now, by convention, often referred to as 'Later Jin' (*Hou Jin*). For an account of the battles at Mt Sarhū, see Ray Huang, 'The Lung-ch'ing and Wan-li Reigns, 1567-1620', in D. Twitchett and J. K. Fairbank (eds), *The Cambridge History of China: The Ming Dynasty, 1368-1644* (Cambridge: Cambridge University Press, 1988), vol. 7, part 1, pp.577–84. Huang's estimates of the number of troops involved are not always credible.

[9] Crossley, *Manchus*, p.71.

[10] Robert B. Oxnam, *Ruling from Horseback: Manchu Politics in the Oboi Regency, 1661-1669* (Chicago: University of Chicago Press, 1975), p.25; Wakeman, *Great Enterprise*, vols 1–2, pp.82–83; Crossley, *Manchus*, p.74.


遇賊罷陣圖
倚柳射賊圖
死後握劍圖

Nurgaci defeats a combined Ming–Korean army at Mt Sarhū. Probably the earliest depictions of Nurgaci's soldiers, the series of prints derive from Korea. Nurgaci's armoured cavalry advance from the left; the Korean infantry from the right. The Koreans bring musketeers and a rocket launcher, as well as deploy *chevaux-de-frise*, an anti-cavalry obstacle that was positioned in front of the infantry ranks to provide protection against cavalry charges. Records show that Nurgaci's cavalry failed to penetrate the Korean infantry's *chevaux-de-frise*. However, Nurgaci then sent in infantry to remove the obstacles, after which a cavalry charge defeated the Korean infantry. In the final illustration, Nurgaci's men have won the field. (*Chungnyeollok*, 1621)

Hung Taiji

On New Year's Day 1627, Nurgaci was succeeded as khan by his fourth son, the talented, charismatic, and ruthless Hung Taiji (1592–1643). The name, ultimately of Chinese origin and earlier used by the Oirat Mongols, means 'Imperial Prince' and was probably not a personal name but the title under which he became known. In late autumn 1629, Hung Taiji led a large force through inner Mongolia, thus bypassing the strong Ming border defences, and, for the first time, moved into China south of the Great Wall. Within a month, Hung Taiji had pushed to the outskirts of Peking itself. He also campaigned in the north. In 1631, the last major independent Amur tribe, the Hurka, submitted, in due time being assimilated as yet another element in the banner armies.[11]

By then, Ming China had realised the great threat emanating from the north-east. The demoralised Ming armies were usually incapable of defeating Hung Taiji's men, if only because of incompetent leadership. In 1628, the Ming even requested foreign military aid in the form of Portuguese field artillery. In response, a Portuguese contingent armed with muskets and 10 field cannon serviced by 20 Portuguese artillerymen under the Artillery Captain Gonçalvo Teixeira Correa set out towards the northern frontier. In 1630, additional Portuguese and 'Negro' artillerymen (Africans and South Asians in Portuguese service) were sent to Peking to train a Chinese artillery unit. However, the first Portuguese contingent saw little action, as Hung Taiji's men retreated before it arrived, and its captain was killed in a mutiny in 1632. The second Portuguese contingent was later recalled and dismissed due to the influence of wealthy Canton merchants. The merchants, who profited greatly from the Portuguese trade, may have feared that the Portuguese might win free trading rights or rights to trade in another port in exchange for their military support so that they would no longer need the Cantonese as middlemen. Or, perhaps, they feared that the Portuguese base at Macao would fall to the Dutch (who already held the Pescadores islands since 1622) unless the Portuguese contingent returned. The merchants even paid the return travel expenses of the Portuguese soldiers.[12]

In the north, Hung Taiji's men had expanded to the Amur River (known in Chinese as the 'Heilongjiang', 'Black Dragon River'). In the west, in inner Mongolia, Hung Taiji in 1634 enlisted as members of his state the Chakhar Mongols, the descendants of Chinggis Khan and the imperial Yuan Mongols who had returned to Mongolia after the fall of their empire in China in 1368. In the east, in 1636–1637, Hung Taiji subjugated Korea, which survived as a tributary with its own army that could be called up for service. Yet more raids into Chinese territory followed in late 1638. This time, Hung Taiji's men pushed to Gaoyang, some 225km south of Peking, and defeated a Ming army, killing one of Ming China's most capable commanders, Lu Xiangsheng. Early the next year, the raid was repeated on an even larger scale. Hung Taiji's men pushed all the way into central Shandong and briefly occupied the provincial capital, where they, among others, captured an imperial prince.

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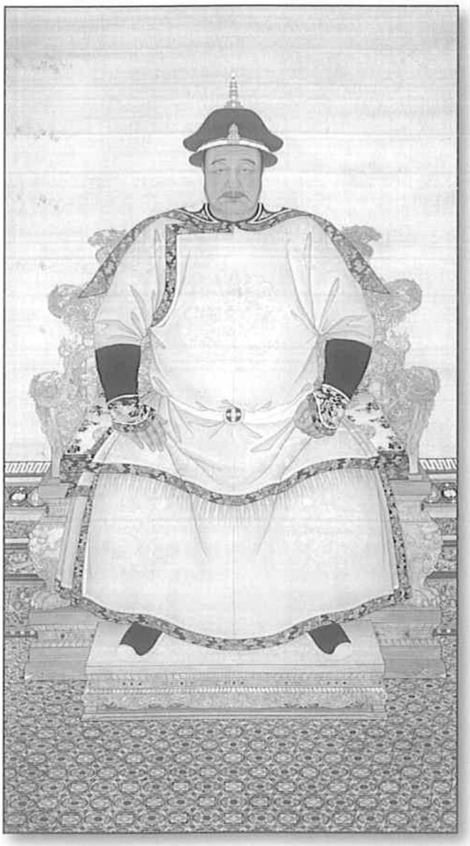
[11] On Hung Taiji, see, for example, Barfield, *Perilous Frontier*, pp.258–63; Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.51–74; Crossley, *Manchus*, pp.75–78, 208.

[12] Michael Cooper, *Rodrigues the Interpreter: An Early Jesuit in Japan and China* (New York: Weatherhill, 1994), pp.337–47, 350–51; Joseph Needham et al., *Science and Civilisation in China: Military Technology: The Gunpowder Epic* (Cambridge: Cambridge University Press, 1986), vol. 5, part 7, pp.392–93.

A true state had been formed out of the loosely allied tribes. With the additional manpower and horses available from the Mongols and the increased food supplies available from tributary Korea, the army, too, reached its mature form. In 1636, Hung Taiji declared himself emperor, not khan, and proclaimed the Da Qing ('Great Pure') empire. By then, he had already given a new name to his people: 'Manchu' (Manchu: *manju*; Chinese: *manzhou*).[13] Despite this, campaigns continued in the north, for instance, against the Solons, another powerful Tungusic federation in the River Argun region, which had adopted Mongol customs and fielded a strong cavalry. Under the leadership of their chief, Bombogor, the Solons on at least one occasion employed 6,000 cavalrymen against the Manchus. In 1640, the Manchus finally defeated Bombogor, who subsequently was executed in Mukden, and the Solons were absorbed into the Manchu banners.[14]

By the early 1640s, the Manchu armies were thus finally poised for a major invasion of China. However, on 9 September 1643, Hung Taiji died suddenly after a brief illness of unknown cause. One of his sons, the five-year-old Fulin (1638–1661), succeeded him as the Shunzhi emperor, while actual power fell into the hands of a regent, Hung Taiji's younger brother Dorgon (1612–1650).[15]



Hung Taiji on the imperial throne. (Hong Kong Palace Museum)

Conquest of China

By 1644, China was in turmoil. Rebellion was endemic, rebels held the imperial capital Peking, Manchu armies had made several successful incursions into northern China, and the Ming regime was gradually slipping from power. The Ming commanders in the north, whose forces still outnumbered those of the Manchus and indeed remained undefeated by them, accordingly invited the Manchus as allies to suppress the rebels in Peking. Dorgon and his Manchu army duly seized Peking in June 1644.[16] Some Ming soldiers were instructed to wear pieces of white cloth on their shoulders so that the Manchus could distinguish them from the rebels whom they were fighting.

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[13] Wakeman, *Great Enterprise*, vols 1–2, p.42 n.43. The first recorded use of the term 'Manchu' was in 1613, and it had been used in diplomatic correspondence with Korea in 1627, but the term was officially adopted only in 1635.

[14] Crossley, *Translucent Mirror*, pp.195–96.

[15] Crossley, *Manchus*, pp.79, 208.

However, Dorgon was not content with merely defeating the rebels: he also entrenched the Manchu Qing state in China by making Peking the Manchu capital. The Manchu Prince Dodo (1614–1649), supported by many former Ming soldiers, continued the offensive against the Ming loyalists. Nonetheless, the Manchu conquest of China took time and remained incomplete for an entire generation. Ming loyalists resisted the Manchus in several places, and, in Guilin in 1647, the Manchus again encountered Portuguese colonial soldiers: 300 musketeers from Macao. Only in 1662 did the last strongholds of mainland China fall to the Manchus.

The Manchus allowed three northern Chinese generals, often called the 'Three Feudatories' (*san fan*), to assume control over three feudatories, or more correctly occupation zones (*fan*), in the southern parts of China on their behalf. However, already in December 1673, the Three Feudatories rebelled, declaring one of their number, Wu Sangui (1612–1678), emperor.[17]

The Kangxi emperor (1654–1722; r. 1662–1722) completed the conquest of China in 1681 by defeating the last of the Three Feudatories and, in 1683, the forces of the Ming loyalist Zheng Chenggong (1624–1662), who (in a situation strikingly similar to today's two Chinas) for some time held out on the island of Formosa (Taiwan) and on territory across the straits in Fujian province. Zheng, the son of a pirate and known in the West as 'Coxinga', had himself taken Formosa from the Dutch East India Company in 1661–1662. All Chinese resistance to the victorious Manchus was silenced and driven underground. Opposition did not die, however, but survived in some places in the shape of secret societies.

The Kangxi emperor and his successors the Yongzheng (1678–1735; r. 1723–1735) and Qianlong (1711–1799; r. 1736–1795) emperors were vigorous administrators and able strategists who further enlarged the Manchu empire. The Manchu empire was not a Chinese empire, although China was by far its most important possession. Manchu maps, at least until the mid-eighteenth century, presented China as only one distinct part of the Qing empire, with the Manchu homeland being another.[18] The Qing ruled China as a conquering power, and the military became, in effect, an army of occupation, or indeed colonisation.

China was pacified. However, the Qing army remained on active duty after the Kangxi emperor's death. The turn had come to deal with the empire's foreign borders. The Qing army was called upon to fight several successful campaigns abroad, to settle disputed borders, and to expand Qing territory.

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[16] On the Manchu conquest of China, see, for example, Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.82–106.

[17] Crossley, *Manchus*, pp.93–95; see also Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.120–50.

[18] Benjamin A. Elman, 'Ming-Qing Border Defence, the Inward Turn of Chinese Cartography, and Qing Expansion in Central Asia in the Eighteenth Century', in D. Lary (ed.), *The Chinese State in the Borderlands* (Vancouver: University of British Columbia Press, 2007), p.49.

Within the central regions of the Manchu empire, general peace lasted for more than a century. The land borders remained intact, even in the face of the powerful Russian empire, and the sea borders were never seriously threatened before the nineteenth century. By then, however, it appeared that the Qing Mandate of Heaven (Manchu: *abka i fulingga*; Chinese: *tianming*) was finally in doubt. Several rebellions broke out in the latter years of the eighteenth century, especially in the minority regions in the south-west, but these were put down, often ruthlessly. The most important revolt was perhaps the White Lotus (*bailianjiao*) uprising of 1796, only suppressed in 1804. Discontent remained, however, and hostilities eventually resurfaced in a number of places. The final eruption was the Taiping War, which began in 1851 after several years of emerging conflict. It began as a religious conflict but soon turned into a full-scale war, indeed the world's bloodiest civil war and the greatest armed conflict before the twentieth century with regard to the total loss of life. The Qing entered the devastating Taiping War with its traditional banner armies but concluded it with new types of military forces, in many ways reformed and modernised according to Western influences. A few years before, the earlier Opium War of 1839–1842 against Britain, mostly fought from the sea and only affecting limited areas, had marked the beginning of Western involvement in the Manchu empire.

The year 1850 was also the last year of the reign of the able and popular Daoguang emperor (1782–1850; r. 1821–1850), who in 1813, while still a prince himself, had defended the imperial palace against Eight Trigrams rebels, a group related to the White Lotus, personally shooting down two intruders before he was relieved. The end of his reign and the beginning of the Taiping War (1851–1866) marked the beginning of the end of the Qing empire, as well as changed the character of the Manchu military system.[19]

Campaigns Farther Afield

In the early days, the borders of the newly won Manchu empire were by no means stable. The main threat came from the direction of Inner Asia: the Mongols, in particular the western Oirat, and the growing Russian empire.

The main political division among the Mongols was between the powerful western Mongols or Oirat ('confederates' as they called themselves, or, as the Turks and accordingly the Russians named them, 'Kalmyks'), whose base was near the uppermost Yenisey, south of modern-day Tuva, and the eastern Mongols, principally the Khalkha, who lived in the region around the earlier Mongol capital Karakorum. The Mongols were in no way united. When the Manchus, in 1634, subjugated the Chakhar Mongols of what eventually became known as 'Inner Mongolia', the Khalkha Mongols of the north had given no support. In 1635–1637, some Khalkha chiefs even presented tribute to Hung Taiji. However, relations between Manchu and Khalkha remained volatile through the 1640s–1650s. The Khalkha, although internally divided, remained a powerful force on the steppe, vast areas of which they controlled. By the middle of the seventeenth century, however, the Khalkha, too, were forced into the position of tributaries. In the 1670s, the western Oirat Mongols were united under the Khan Galdan (1632 or 1644–1697; r. 1671–1697). In 1688, the powerful Oirat Mongols, now constituting the khanate of Zungaria (Jegünghar or Dzüngaar; 'left hand', meaning left or east wing, in this case of the Oirats), launched a successful campaign against the Khalkha, who in response sought protection from and submitted to the Qing at Dolonnor in 1691, accepting the Kangxi emperor as Great Khan and successor to Chinggis Khan. After the Oirat had been defeated by three consecutive Manchu expeditions, armed with muskets and cannon, from 1688 to 1697, the Kangxi emperor, in the early 1700s, included Khalkha in the Manchu empire as a border buffer zone that eventually would become known as 'Outer Mongolia'. A Manchu garrison was established at Örgöö (Urga; modern-day Ulan Bataar).[20]

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[19] On the Taiping War, see, for example, John K. Fairbank (ed.), *The Cambridge History of China: Late Ch'ing, 1800-1911* (Cambridge: Cambridge University Press, 1978), vol. 10, part 1, pp.264–317.

The Manchus also had to deal with the Russian empire. Russian fur traders and explorers ranged across Siberia and into the Amur valley, north of Manchuria. In the mid-seventeenth century, the two vigorous, young empires confronted each other at the Amur, even though the armed might of each in the region remained comparatively small. In 1651, Russian cossacks built a fort on the Amur, called 'Achansk', from which they savagely oppressed the natives. The latter accordingly requested Manchu assistance, so, in 1652, a Qing army attacked and destroyed Achansk. In response, the Tsar sent an increasing number of Russian regular soldiers to the Far East. However, the outbreak of the Thirteen Years' War in 1654 (Russia against the Polish–Lithuanian Commonwealth, with Sweden and other states soon joining the hostilities) obliged the Tsar to recall most of them to Europe.[21] Even so, more Russian raids followed. At first, the Qing responded by forcibly resettling some local tribes out of reach of the Russians. Nonetheless, Russian cossacks continued to raid the Amur region for several years.[22]

In 1659, Bahai (d. 1696), a Manchu of the Bordered Blue Banner, was appointed first commandant and, three years later, military governor at Ningguta (in modern-day Jilin province), a position that he would retain until 1682. Bahai enlarged the garrison at Ningguta and incorporated some of the tribes in the region into the banner system as 'New Manchus' (Manchu: *ice manju*; Chinese: *xinmanzhou*).

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[20] See, for example, Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.153–56; Crossley, *Translucent Mirror*, pp.317–18.

[21] On the series of wars that between 1654 and 1667 engulfed eastern and northern Europe, see Michael Fredholm von Essen, *Charles X's Wars* (Warwick: Helion & Company, 2021–2023), vols 1–3.

[22] On the early Russian expansion into Manchu-controlled territories, see Mark Mancall, *Russia and China: Their Diplomatic Relations to 1728* (Cambridge, MA: Harvard University Press, 1971), pp.21–32; John J. Stephan, *The Russian Far East: A History* (Stanford, CA: Stanford University Press, 1994), pp.21, 28; James Forsyth, *A History of the Peoples of Siberia: Russia's North Asian Colony 1581-1990* (Cambridge: Cambridge University Press, 1992), pp.104–05; W. B. Lincoln, *The Conquest of a Continent: Siberia and the Russians* (New York: Random House, 1994), pp.64–70.

In 1672, Russian regulars returned to the region. Renewed hostilities broke out between Russians and natives tributary to the Qing. Manchu expeditionary forces were sent to the Okhotsk coast to assert Qing sovereignty. In the years between 1676 and 1684, the Kangxi emperor sent large numbers of additional soldiers to the region. He established a new military command at Jilin (Kirin), to the west of Ningguta. However, the Russians had also built a fortified settlement named 'Albazin' on the Amur and appointed a governor, Aleksey Tolbuzin. When confronted by a major Manchu army in 1685, Tolbuzin surrendered and evacuated the fort. The Manchu impact was indeed so strong that 45 cossacks with families instead defected to join the Manchu banners. The Manchus accepted their defection since they hoped to find somebody qualified to teach Russian, and the cossacks provided the core for a new banner unit henceforth known as the 'Albazinian bannermen'. The Manchus then destroyed Albazin. However, as soon as the Manchu army was gone, Tolbuzin returned to rebuild the fort with more modern defences.

In 1686, another Manchu expedition returned to Albazin, killed Tolbuzin, and retook the fort, which was again destroyed. Negotiations between Manchus and Russian followed on Russian territory, under the ominous eyes of a strong Manchu army, and resulted in the Treaty of Nerchinsk in 1689. Russia had to abandon the Amur region to the Manchus. This treaty, together with the later Treaty of Kyakhta, signed in 1727, delimited and, with the exception of a single allowed trade route (through Kyakhta), closed the Manchu–Russian border. An agent of the Tsar as well as a Russian ecclesiastical mission were allowed to settle in the Qing capital, and Russian caravans regularly visited Peking. Relations were generally peaceful, as Russia did not have the resources to match Qing military power in the region.

The increased Qing presence in the Amur region attracted or impressed many northern tribes into the Qing military, notably, the Tungusic tribe Sibo, which was incorporated into the banner system.

In the eighteenth century, the Manchu empire also greatly expanded its influence in Inner Asia, specifically in Tibet and Turkestan (modern-day Xinjiang). The chief adversary of the Qing was, again, the Oirat Mongols of Zungaria, who by no means were destroyed by the defeat of their leader Galdan in 1697. Even so, the Qing already enjoyed considerable influence in Tibet, in particular since a coup in 1705, backed by Qing units, and the Qing invasions of Tibet in 1718 and 1720 to expel the Oirat Mongols, who in 1717 had invaded and assumed control over the country. When Manchu overlordship in Tibet in 1750 once more was threatened by the Oirat Mongols as well as a Tibetan uprising, a Manchu army again invaded Tibet, occupied its capital Lhasa, and reimposed Qing authority. Tibet was turned into a Manchu protectorate.[23]

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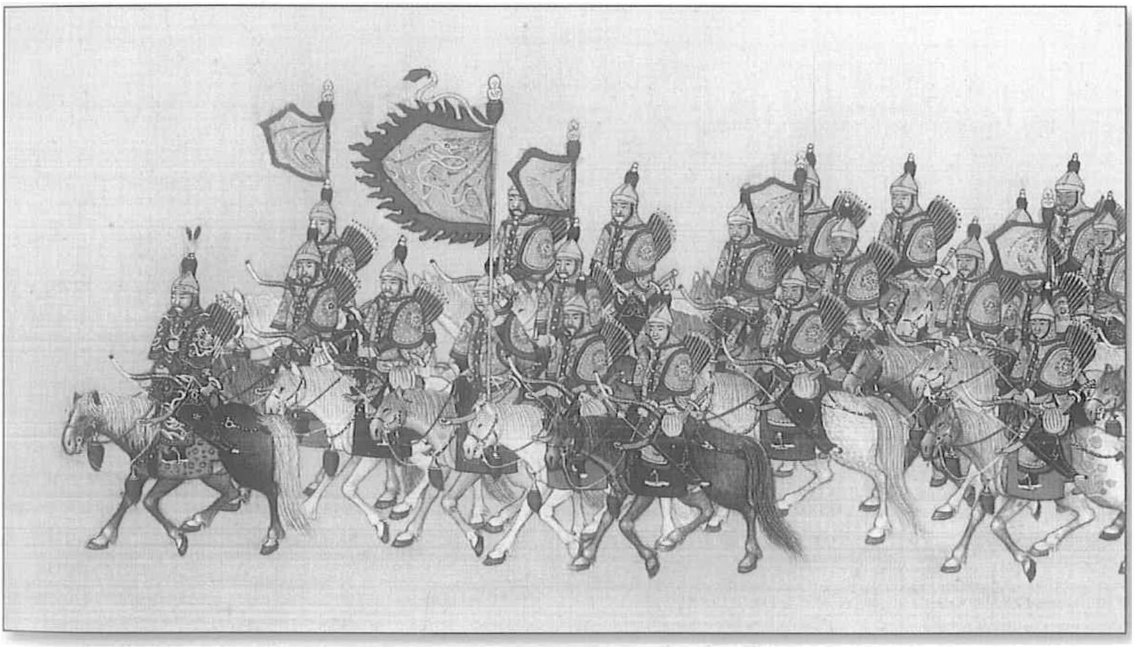
[23] See, for example, Luciano Petech, *China and Tibet in the Early 18th Century: History of the Establishment of Chinese Protectorate in Tibet* (Leiden: E. J. Brill, 1950), *passim*; Crossley, *Manchus*, pp.80, 100–01, and *Translucent Mirror*, p.330; Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.160, 226–27; Rawski, *Last Emperors*, pp.250–51.

The Manchu empire controlled Tibet and had delimited a border with Russia. But between lay the mountains and deserts of Turkestan, held by the Oirat. Qing bannermen accordingly led a series of expeditions into Turkestan and, during 1755–1759, subjugated and largely exterminated the Oirat Mongols. At the same time, the Manchu forces also conquered the Islamic regions of the Tarim basin, Aksu, Kashgar, and Yarkand, thus consolidating their hold over Inner Asia. Turkestan, named the 'New Territories' (Sinkiang; Xinjiang), was finally incorporated into the Manchu empire in the 1760s. It was turned into a land of exile for political and common criminals.[24]

Yet more campaigns followed to the south. Although they were frequently successful, it was soon evident that the Manchu armies, at their best in the cold, northern regions, were considerably less suited for campaigns in a tropical climate, where the northern soldiers often succumbed to tropical diseases that were not well understood by them. Qing soldiers invaded northern Burma in 1767 and fought a difficult and frequently disastrous campaign as much against the climate as the Burmese until 1770, when a face-saving treaty was concluded and the Qing pulled out. The Burmese successfully outmanoeuvred and frequently annihilated Qing forces, which also suffered great losses, in particular of horses, due to the climate. Vietnam (then known to the locals as 'Dai Viet' and to the Chinese as 'Annam', or rather 'An-nan', the 'pacified south') was invaded in December 1788, but the Qing were soon defeated there in January 1789. Nonetheless, a face-saving treaty was concluded there as well, with Annam accepting a very nominal tributary status.[25]

Banner cavalry of the Bordered Yellow Banner. (Anon.)



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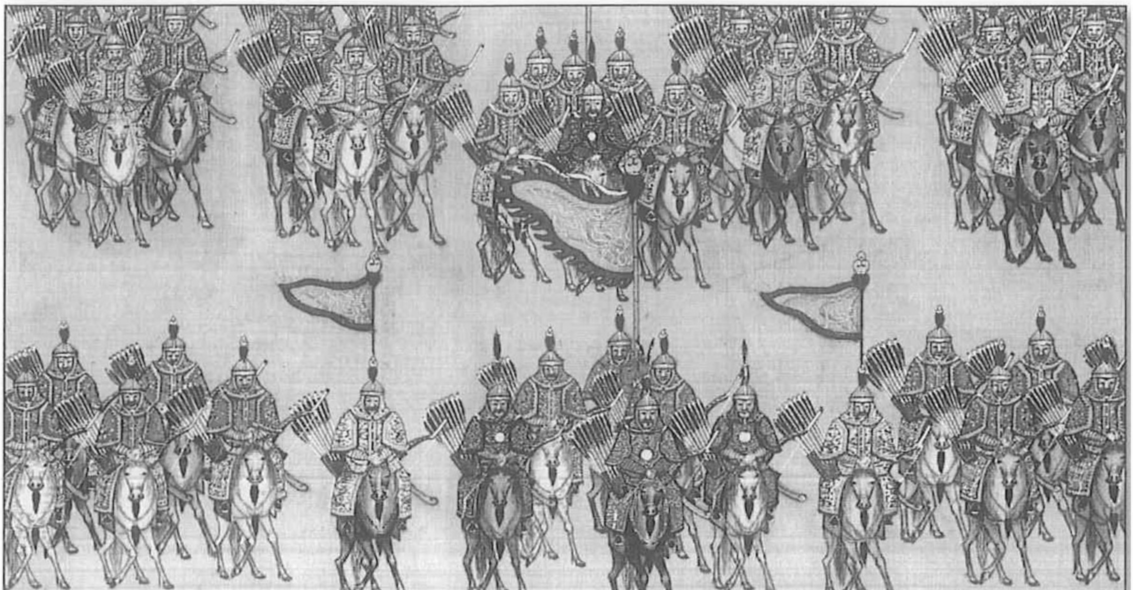
[24] See, for example, Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.353–55. For a background to the Oirat campaigns, see, for example, Gertraude R. Li, *Manchu: A Textbook for Reading Documents* (Honolulu: University of Hawai'i Press, 2000), pp.317–21.

[25] See, for example, Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.263–68 (Burma), 276–78 (Vietnam).

Trouble was also brewing on the Tibetan border with Nepal. The Gurkhas had recently gained ascendancy throughout Nepal, and, in 1790–1791, they occupied some Tibetan districts near the Nepalese border. In late winter and early spring 1792, a combined Qing and Tibetan army under the Manchu General Fukang'an (d. 1796) successfully invaded Nepal. The campaign was fought during extremely cold winter conditions and ended with the decisive defeat of the Gurkhas not far from Kathmandu, their capital. Nepal, too, had to accept tributary status.[26]

The Qing imperial army had conquered vast territories for the Manchu empire. But during the last two decades of the reign of the Qianlong emperor (and concurrently the eighteenth century), the rot had already set in, and the Manchu empire was closing in on itself. The military ability and value of the bannermen soon diminished due to large-scale mismanagement and corruption. This was the time, it should be remembered, when Britain and France had gone to war over India. The Manchu empire still remained comparable, if not superior, to Europe in size, military, social activity, and sophistication. In the late seventeenth century, several million pieces of porcelain were sent to Europe every year, and European observers of the empire, perhaps because close contact was not yet common, were generally highly impressed by Manchu and Chinese sophistication and culture. Tibet was a protectorate that depended closely upon the Qing and, for religious reasons, formed a key region of the empire. When the Qing invaded Nepal



Banner cavalry of the Bordered Yellow Banner. (Anon.)

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[26] Jeremy Black, *War and the World: Military Power and the Fate of Continents 1450-2000* (New Haven, CT: Yale University Press, 1998), p.130. See also J. L. Cranmer-Byng (ed.), *An Embassy to China: Being the Journal Kept by Lord Macartney during His Embassy to the Emperor Ch'ien-lung 1793-1794* (London: Folio Society, 2004), p.275 n.24.

in 1792 in retaliation for the Gurkha invasion of Tibet the previous year, the Manchus suspected that Britain had helped the Gurkhas.[27] The Tibetans, too, believed that the British had assisted the Gurkhas.[28] Britain's option of doing so was well known; a couple of years later, the British ambassador to the Qing court, Macartney, concluded that Britain 'might probably be able from Bengal to excite the most serious disturbances on their [the Qing empire's] Tibet frontier by means of their neighbours there, who appear to require only a little encouragement and assistance to begin'.[29] What would have happened if the Manchu empire had not declined but instead chosen to intervene in the struggle for India, the climate of which was less severe than that of Indochina? We will never know the answer.

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[27] Cranmer-Byng, *Embassy to China*, p.30.

[28] Sarat Chandra Das, *Journey to Lhasa and Central Tibet* (New Delhi: Manjusri, 1970), p.192.

[29] Cranmer-Byng, *Embassy to China*, p.163.

2

Army Organisation

Bannermen

The early Manchu state, although small, was built to conquer. Its army was centralised both in command and organisation, and this strong central control was retained by the empire at least until the early nineteenth century. Its army achieved a warlike reputation early on. Nurgaci's original Jurchen tribesmen were typical Inner Asian horse archers. So were the soldiers of the first four banners. Each had an allowance sufficient to maintain between three and six horses.[1] In his earliest campaigns, Nurgaci relied on the Jurchen tribal organisation of small clan groups (*mukūn*) led by chiefs known by the title 'arrow lord' (*niru i ejen*).[2] These units had no fixed number of soldiers but never consisted of more than a couple of hundred men, divided into 10–12-man hunting or fighting groups. In addition, Nurgaci had a few units of non-clan soldiers, known as the 'Chinese-martial' (a modern term that may reflect their situation better than simply calling them 'Chinese'). They were named the '*ujen cooha*' (cherished soldiers). The majority of Nurgaci's men fought as cavalry, but he could also call up limited numbers of infantry consisting of slaves and levies. It is indeed unknown whether a sufficient number of horses were available to mount all Nurgaci's men. The tribal organisation was soon regarded as insufficient, so, with the help of Mongol and Chinese advisors, Nurgaci replaced it with civil-military units known as 'banners', the men of which were known as 'bannermen'.[3]

The earliest form of the banners, known to have existed in 1595/1596 at the latest, consisted of 10 units each of 10 horse archers, every unit carrying its own banner, a square flag about 0.5m in length. The unit banners were yellow (*huang*), white (*bo*; actually a buff shade), red (*hong*), blue (*lan*), and black. As there were only five banner colours for the 10 units, every second unit would carry the same banner as its twin.[4] The first four banner colours remained in use by the banner troops until the very end of the state created by Nurgaci, while the black banner was used by the Chinese-martial units only until their later reorganisation and absorption into the Eight Banners in 1642 (more on which below).[5]

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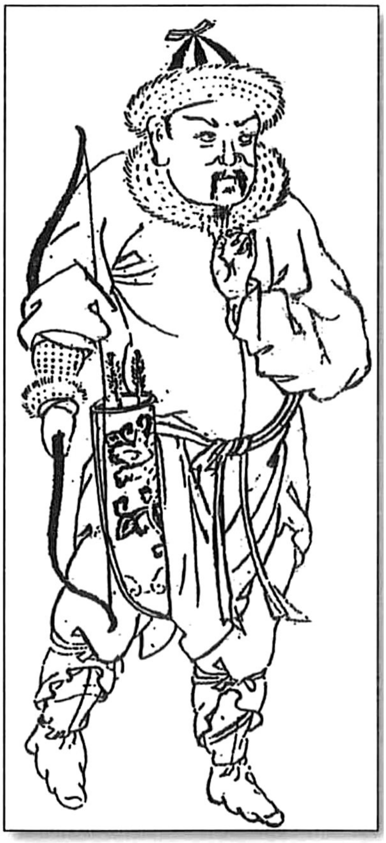
[1] See, for example, Rawski, *Last Emperors*, p.61.

[2] A title rendered '*niulu ezhen*' in Chinese transliteration.

[3] See, for example, Crossley, *Manchus*, pp.26–27, 29, 44, 207. On the Chinese-martial and the *ujen cooha*, see Crossley, *Manchus*, pp.6–7, 29, 203–05, and *Translucent Mirror*, p.96.

According to the annals, the banner system was formalised and formally inaugurated in 1601. It was regarded as a unified territorial administration over Nurgaci's land paralleled by a military organisation. The banner system was the basic Manchu administrative structure. The system served both for purposes of defence and as a means of organising tax collection and land distribution for the whole Manchu population. The banner regiment organisation was also used while hunting.[6] The idea of organising military units known as 'banners' (Manchu: *gūsa*; Chinese: *qi*; Mongolian: *khōšighun* or *khōshun*) was most likely inspired by Ming military terminology. The first formal banners were the four originally formed of the clan groups: yellow, white, red, and blue. The black banner of non-clan soldiers was retained but not yet included in the system. Nurgaci's intention appears to have been to break up the old clan groups and replace them with a new organisation, loyal directly to himself. This conclusion is supported by the fact that he, in 1601, made four of his relatives lords of the new banners. Nonetheless, we can assume that the first bannermen (eventually to be known in Chinese as '*qiren*') were little different from the soldiers in the earlier clan groups.[7]



Jurchen horse archer. (Wang Qi, 1609)

In 1616, as Nurgaci proclaimed himself khan of the Jurchen, he also reformed the army. Four additional banners were added to the organisation by splitting each of the existing ones in two. Each banner remained commanded by a close supporter of Nurgaci: seven of his surviving sons and a nephew, collectively known as the 'eight cardinal princes' (*hōšoi beile*; as in the eight cardinal points of the shamanic compass).[8] The new banners were identified by the same colours as their parent units, but their standards had coloured borders. The new banners were accordingly referred to as 'bordered' (Manchu: *kubuhe*; Chinese: *xiang*) while the original ones were known as 'plain' (Manchu: *gulu*; Chinese: *zheng*) banners. The first three new banner flags were trimmed with red, while the red banner was edged with white. The banners accordingly carried names such as the 'Plain Yellow Banner', the 'Bordered Yellow Banner', and so on. The shape of the actual banners also changed. The plain banners remained square, but the bordered banners became triangular with scalloped borders in imitation of flames. All banners were embroidered with a dragon chasing a flaming pearl.

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[4] Ch'en, 'Creation', p.26.

[5] Crossley, *Manchus*, pp.45–46, and *Translucent Mirror*, p.95; Charles O. Hucker, *A Dictionary of Official Titles in Imperial China* (Stanford, CA: Stanford University Press, 1985), p.91.

[6] See, for example, Rawski, *Last Emperors*, p.61.

[7] See, for example, Crossley, *Manchus*, p.207.

[8] Crossley, *Manchus*, pp.64 with n.5, 207.

The 'Eight Banners' (Manchu: *jakūn gūsa*; Chinese: *baqi*), as the organisation became known, hence formed the mainstay of Nurgaci's army (see Table 1). Each banner was commanded by a general, until 1723 known as '*gūsai ejen*' (banner lord),[9] thereafter '*gūsai amban*' (banner official). In Chinese, he was called '*dutong*' or sometimes '*jiangjun dutong*'.[10]

Names of the Eight Banners in Manchu and Chinese[11]

Banner Name	Manchu Term	Chinese Term
Plain Yellow	*gulu suwayan*	*zhenghuang*
Plain White	*gulu šanggiyan*	*zhengbai*
Plain Red	*gulu fulgiyan*	*zhenghong*
Plain Blue	*gulu lamun*	*zhenglan*
Bordered Yellow	*kubuhe suwayan*	*xianghuang*
Bordered White	*kubuhe šanggiyan*	*xiangbai*
Bordered Red	*kubuhe fulgiyan*	*xianghong*
Bordered Blue	*kubuhe lamun*	*xianglan*

Eventually, the banner colours became associated with the colours of traditional Inner Asian and Chinese cosmology. The yellow represented the centre (and yellow was later worn only by the imperial household); the red, the south; the white, the west; the north should have been black, but black was regarded as a bad omen so was substituted by blue. That a black flag had originally been used was, for this purpose, conveniently forgotten.[12]

Internal Organisation of the Banners

Nurgaci subdivided the banners into cavalry squadrons referred to as 'arrows' (Manchu: *niru*; Chinese: *niulu*; also called '*zuoling*' in Chinese after its commander's title), which was the traditional steppe designation for a mounted squadron. The squadrons were, in turn, divided into squads of 10 men each.[13] By 1616, there were 201 Manchu squadrons divided among the Eight Banners. The number of men in a squadron was not fixed, as this was so far only a renaming of the old tribal unit *mukūn*. As the banner was also a territorial unit, the households of the men, including slaves and cattle, were also regarded as part of the banner. By 1619, the total number of bannermen was 30,000, according to the Chakhar Mongol ruler, Lighdan Khan (r. 1604–1636).[14] He was a deadly rival of Nurgaci and would have been in a position to ascertain his enemy's forces. The squadron was headed by an officer who, at first, used the old Manchu title 'arrow lord' (*niru i ejen*), then from 1634 the title 'arrow general' (Manchu: *niru i janggin*; Mongolian: *sumun i janggin*) or alternatively the Chinese title '*zuoling*' (for an overview of military ranks, see Table 2).[15]

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[9] A title rendered '*gushan ezhen*' in Chinese transliteration.

[10] The Chinese title '*jiangjun*', general, also occurred in Manchu as a loanword in the form of '*janggin*' or '*jiyanggiyūn*'. Thus, Manchu '*amba jiyanggiyūn*' corresponds to Chinese '*da jiangjun*', general-in-chief.

[11] Example: Bordered Red Banner = *kubuhe fulgiyan i manju gūsa* / *xianghongqi*.

[12] Crossley, *Manchus*, p.46. East would have been azure, that is, green, blue, or even black in Chinese tradition, although the Qing interpreted it as green and reserved it for the Green Standards troops.

[13] Ch'en, 'Creation', p.27.

Banner Military Ranks[16]

Mandarin Grade[17]	Rank	Manchu Term	Chinese Term	Position
1 l	General	*janggin*	*jiangjun dutong*	Banner Commander
2 u	Lieutenant General	*meiren i janggin*	*fu dutong*	Deputy Banner Commander
3 u	Brigadier	*jalan i janggin*	*canling*	Regimental Commander
3 l	Colonel	*gūsa i da*	*xieling*	Regimental Officer
4 u	Lieutenant Colonel[18]	*niru i janggin*	*zuoling*	Squadron Commander
5 u	Major	*hafan i jergi janggin*	*fangyu*	Squadron Officer
6 u	Captain	*minggatu*	*qianzong*	
7 u	Lieutenant	*funde bošokū*	*xiaoqixiao*	
9 u	Warrant Officer	*bošokū*	*lingcui*	
–	Private	*aliha cooha*	*ma jia/xiaoqi*	

Five squadrons formed a regiment (Manchu: *jalan*; *jialan* in Chinese transliteration; also called '*canling*' in Chinese after its commander's title), and each banner contained from two (in the case of Mongol banners) to at first five then (from the early 1630s) six regiments.[19] Probably already before 1644, regulations provided that each squadron should have a nominal strength of about 300 men subject to military service.[20] By the mid-Qing period, a Manchu banner thus had a nominal paper strength of some 9,000 soldiers and their households as a recruitment base for military service. By then, each banner was commanded by a general (Manchu: *janggin*; Chinese: *dutong*) assisted by two lieutenant generals (Manchu: *meiren i janggin*; Chinese: *fu dutong*), each regiment by a brigadier (Manchu: *jalan i janggin*; Chinese: *canling*) usually aided by one or more deputy regimental commanders (*fu canling*), and each squadron by a lieutenant colonel (Manchu: *niru i janggin*; Mongolian: *sumun i janggin*; Chinese: *zuoling*). Lower-ranking squadron officers included the major (Manchu: *hafan i jergi janggin*; Chinese: *fangyu*), captain (Manchu: *minggatu*; Chinese: *qianzong*), one or more lieutenants (Manchu: *funde bošokū*; Chinese: *xiaoqixiao*), and five warrant officers (Manchu: *bošokū*; Chinese: *lingcui*). Privates were generally called '*ma jia*', meaning 'armoured cavalryman', or, more formally, 'valiant cavalryman' (Manchu: *aliha cooha*; Chinese: *xiaoqi*). There were also supernumeraries (*yangyoubing*), who awaited appointment to the ranks of *ma jia* as vacancies occurred. How much, if any, of this elaborate organisation and Chinese terminology was used by the earlier banners is unknown.[21]

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[14] Crossley, *Translucent Mirror*, p.212.

[15] The Manchu title '*niru i janggin*' was rendered '*niulu zhangjing*' in Chinese transliteration.

[16] English translations, by necessity somewhat arbitrary, are based on position rather than literal translations. Banner officers in garrison units were, although of the same grade, often known by different titles, among them commandant (Manchu: *hoton i da*; Chinese: *chengshouyou*, *chengshouwei*) instead of brigadier and post commandant (Chinese: *fangshouwei*) instead of lieutenant colonel.

[17] u = upper grade; l = lower grade.

[18] A lieutenant colonel who served as deputy regimental commander was known as '*fu canling*'.

[19] An edict dated to the period 1630–1633 ordered each banner to organise additional squadrons until the total reached the quota of 30 squadrons. Chaoying Fang, 'A Technique for Estimating the Numerical Strength of the Early Manchu Military Forces', *Harvard Journal of Asiatic Studies*, 13 (1950), pp.212–13.

The banners, regiments, and squadrons were socio-military formations and should not be confused with, or regarded as, standing military units or units for deployment in the field. Such a confusion is, however, obvious in the academic literature.[22] Instead, each squadron in case of war was ordered to provide a number of men determined by the requirements of the situation. These men, who could be as few as one or as many as several dozens per squadron, were then assembled in a banner unit or distributed between several units, apparently formed for the occasion. The banners and squadrons constituted a foundation for recruitment, not fighting formations. However, the fighting formations thus formed were also referred to as 'squadrons' and, in case of major divisions, 'banners', but these units were not the same as the squadrons from which the men were called up. This inherent ambiguity makes it very difficult to know exactly how many men took part in a given engagement, campaign, or even formed a battle unit. There seems to be no surviving evidence on how the fighting formations (that is, units in the field) were organised or of how many men they consisted. From about 1634, squadrons were reorganised so that each would provide 70–100 soldiers. By 1690, the standing army is recorded as having consisted of 89 men from each Manchu or Mongol squadron and 47 from each Chinese squadron. This would have provided a standing army of more than 83,000 men, probably all in or around Peking.[23] However, the men called up did not serve together but were divided among the field units, which yet were formed from men of the same banner.[24] Somewhat surprisingly, there seems to be no surviving description of the organisation of the field units.

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[20] Fang, 'Technique', p.204.

[21] See, for example, Hucker, *Dictionary*, pp.91–92.

[22] This mistaken view even appears, although more as an afterthought, in Ch'en, 'Creation', p.11.

[23] Nominally, 53,578 Manchus, 17,355 Mongols, and 12,361 Chinese. Not all served as cavalry. Of the men from the Manchu and Mongol squadrons, 20 out of 89 (about 22 percent) were assigned duty as infantrymen. Of the men from the Chinese squadrons, 13 out of 47 (about 28 percent) were so assigned. Fang, 'Technique', pp.193, 208–09.

Our seemingly only clue to how the Manchus raised their field units is the system used to create new squadrons. This was generally done in preparation for a new, major war and with the purpose of raising more troops. A new commander would be appointed, and surplus men taken from existing squadrons to form a new 'half-squadron' (Manchu: *hontoho*; Chinese: *bange zuoling*) of 100 men or less. Later, when sufficient men or enlisted enemy captives were available, the strength would be increased to from 100 to 200 men, at which point the squadron was regarded as full.[25] One may possibly draw the conclusion that the half-squadron would then be sent to the front in its entirety and that, only upon its return from the campaign, would it be incorporated into the regular system of raising soldiers. If so, a field squadron can thus be expected to have a strength of this magnitude, namely, from 100 to 200 men. This conclusion is supported by the few recorded instances of unit strengths in 1681, when squadrons (and incidentally Green Standards units, more on which below) apparently numbered 100 men each.[26] Another indication that this probably was the normal strength of a field squadron is British Ambassador Lord George Macartney's observation in 1793–1794 that a flag was attached to every 200 men while on campaign, which would, unsurprisingly, mean one flag per squadron or infantry company.[27]

Hung Taiji had originally commanded one of the banners. Between 1630 and 1633, he as khan centralised military power by also assuming control of two additional banners: those of a brother and his cousin. He then named them the 'Upper Three Banners' (Manchu: *ilan dergi gūsa*; Chinese: *shangsanqi*). These – the Bordered Yellow, Plain Yellow, and Plain White Banners – thence remained the patrimony of Nurgaci's lineage, the Aisin Gioro. The remaining Plain Red, Bordered Red, Plain Blue, Bordered Blue, and Bordered White Banners became known as the 'Lower Five Banners' (Manchu: *fejergi sunja gūsa*; Chinese: *xiawuqi*).[28] The Qing habit of fielding only ad hoc, non-permanent field units should also probably be seen in this light. Hung Taiji wanted a permanent centralisation of military power. He saw a need to reduce the influence of the traditional nobility and to sever the old tribal ties within the Qing military.

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[24] This is at least the impression one gains from an order issued in 1681, in which the commander orders two field units, apparently two Manchu cavalry regiments, to advance. To identify the two units he had in mind, he referred to them by the name of their parent banner unit, which he hardly would have done unless all soldiers within the field unit belonged to the same banner. Nicola Di Cosmo, 'Elephants, Rainstorms, and Pythons: The Experience of War in Southwest China during the Early Qing', *Ethnicity, Politics and Cross-Border Cultures in Southwest China: Past and Present*, 25–28 May 2000, Lund University, Sweden, Conference Presentation, p.18; Nicola Di Cosmo (trans.), *The Diary of a Manchu Soldier in Seventeenth-Century China: 'My Service in the Army', by Dzengšeo* (Abingdon: Routledge, 2006), p.66.

[25] Fang, 'Technique', pp.204, 214.

[26] Di Cosmo, 'Elephants', p.7; Di Cosmo (trans.), *Diary*, p.63.

[27] Cranmer-Byng, *Embassy to China*, p.218.

[28] See, for example, Hucker, *Dictionary*, p.91.

Men of the Banners

Nurgaci recruited many followers from a nebulous group of 'Chinese' of diverse ethnic origins that certainly existed in Manchuria from the late 1500s. Some had originated in northern China but migrated into Jurchen territory, while others were probably of Korean origin. Many were Jurchen whose families had assimilated to Chinese or Korean culture. They were fluent in Chinese, associated with the Chinese border towns, and occasionally literate. These Chinese-martial (*hanjun*) bannermen gradually rose in importance among Nurgaci's forces.[29] From 1622 at the latest, decrees indicate that five percent of the adult male Chinese population in Manchu-controlled Liaodong would have had to enter military service. Of the men selected, at least half were ordered to be employed as matchlockmen or as crew to what appears to have been the heavy musket known as a 'jingal'.[30]

Other followers were recruited among groups that were, at one time or another, called 'Mongols' (*menggu*). Of these, some were Mongolian-speaking descendants of Mongols living in Manchuria during the Ming period, while others were descendants of Jurchen living in northern Manchuria who spoke a distinct dialect, were culturally and politically organised as Mongols, and were called 'Mongols' by Nurgaci and his followers. Others were true Mongols from the steppe. Among those earliest recruited were the Khorchin and the Kharachin Mongols, who became most closely identified with the Manchus, with a Mongol squadron already existing within the army in probably 1623. A distinct Mongol corps was created in 1626, commanded by a noble named 'Unege' (d. 1635). Mongol and Manchu bannermen were closely associated not only because their methods of warfare were very similar. The Mongol banners subsumed the Chakhar and Kharachin Mongol populations, which provided a link to the imperial family of Chinggis Khan. Through this link, the Manchu empire construed itself as heir to the Mongol Great Khans and claimed the right of dominion over the Eurasian steppes.[31]

As numerous Mongols and Chinese-martial joined the victorious Manchu army, they were taken into the system and organised into their own banner units. The Mongols were organised into at least two banners by 1629. By 1635, the Mongol banners had expanded into eight.[32]

The soldiers recruited among the Chinese-martial were originally formed by Nurgaci into a distinct non-clan unit. In 1630, they were reorganised into a separate Chinese-martial banner. At the time of the reorganisation, several large garrisons of Chinese Ming soldiers had recently surrendered, and 3,000 such men were incorporated into the Qing army, divided into battalions (*ying*) and companies (*dui*) of musketeers and artillerymen. These new men became known in Manchu as '*nikan cooha*' (Chinese soldiers) rather than the old designation '*ujen cooha*' (cherished soldiers), which henceforth fell out of use.[33] The change in terminology seems to have taken place in the late 1620s.[34] In 1637, the Chinese-martial banner was expanded into two banners, in 1639 again expanded, this time into four banners, and finally in 1642 expanded into eight banners. The Chinese-martial banners were important, especially for their ability to handle engineering tasks and the early Manchu artillery. They were never a complete success, however, as they, in Hung Taiji's opinion, did not fight as courageously as the Manchu soldiers. Some Chinese-martial bannermen were thus regarded as inferior to Manchus and Mongols and somewhat prone to halt rather than risk close combat.[35]

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[29] Crossley, *Manchus*, pp.6–7, 204–05.

[30] Nicola Di Cosmo, 'Did Guns Matter? Firearms and the Qing Formation', in L. A. Struve (ed.), *The Qing Formation in World-Historical Time* (Cambridge, MA: Harvard University Press, 2004), pp.139–40.

[31] Fang, 'Technique', pp.193, 208; Crossley, *Manchus*, pp.7, 97.

[32] Fang, 'Technique', p.193; Crossley, *Manchus*, p.97; Nicola Di Cosmo and Dalizhabu Bao, *Manchu-Mongol Relations on the Eve of the Qing Conquest: A Documentary History* (Leiden: Brill, 2003), pp.66–67.

At the time of the invasion of China, the Manchu army counted no less than 24 banners, eight each of Manchus, Mongols, and Chinese-martial (known as *manzhou baqi*, *menggu baqi*, and *hanjun baqi*, respectively). The first two groups primarily provided cavalrymen, and the third engineers, artillery, and musketeers.[36] There were, however, numerous exceptions. By 1690, about 22 percent of the men from the Manchu and Mongol squadrons and about 28 percent of the men from the Chinese squadrons were assigned duty as infantrymen. Of the total numbers, about 23 percent were so assigned.[37] The Chinese-martial banners also, unlike the Manchu and Mongol banners at this time, reportedly consisted of cavalrymen armed with firearms instead of bows and infantrymen who were foot archers. There may also have been some organisational differences, as the Chinese-martial banners reportedly were not formed to include vanguards or guards units (see below).[38]

All bannermen were personally attached to the emperor, and the Manchu army seems to have inherited the Turkic–Mongolian institution of hereditary military service. The soldiers took pride in their closeness with the court and its emperor, and this called forth their profound loyalty. As the position of bannerman was hereditary, in later years, the banner soldiers still knew that they were the lineal descendants of the men who had created the early Manchu state. These men were accordingly the most reliable soldiers of the Qing. Until the end of the eighteenth century, the banner army was one of the most effective military organisations that East Asia had ever known.

Many Manchu women were, by old tradition, trained in archery and horsemanship in the same way as Manchu men. Some also took part in battles, and a few became banner officers during the conquest of China, attaining the rank of lieutenant.[39]

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[33] Wakeman, *Great Enterprise*, vols 1–2, pp.168, 181. Liu Chia-chü [Liu Jiaju], 'The Creation of the Chinese Banners in the Early Ch'ing', in P. Huang (ed.), *The Early Ch'ing Dynasty: State and Society, 1601-1722*, in *Chinese Studies in History*, 14:4 (Summer 1981), p.53, suggests that the Chinese banner was formed only in 1633, under the command of Shi Tingzhu (1599–1661).

[34] Crossley, *Translucent Mirror*, pp.96–97.

[35] Liu, 'Creation', pp.53–54; Fang, 'Technique', p.193; Wakeman, *Great Enterprise*, vols 1–2, p.168.

[36] See, for example, Fang, 'Technique', p.199.

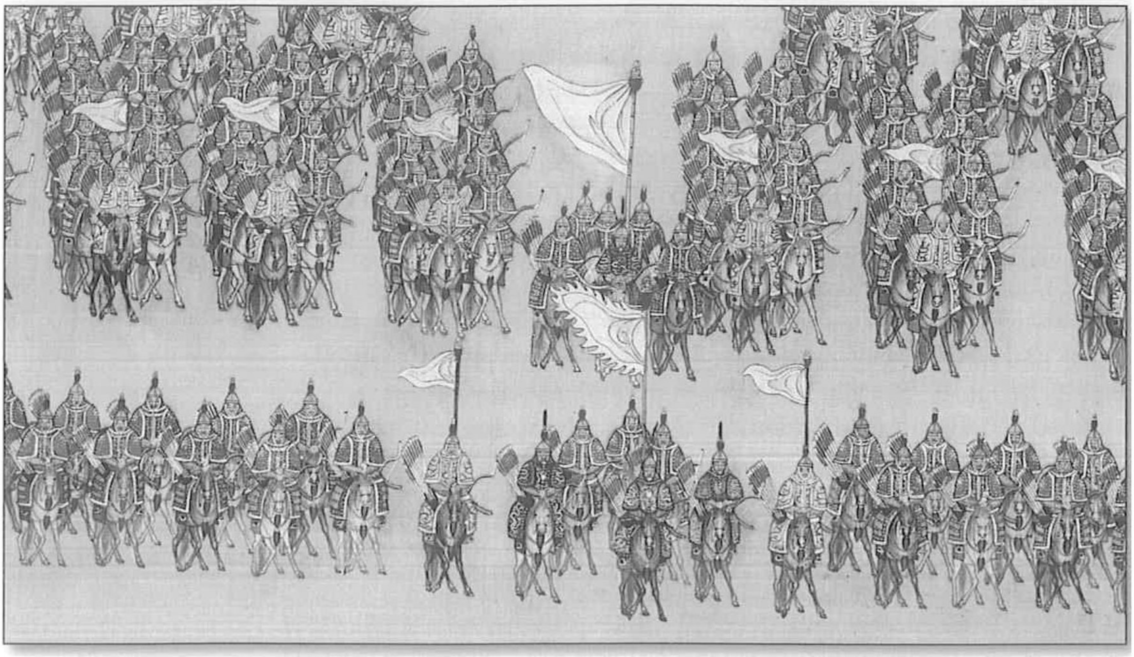
[37] Total numbers were then, as noted, nominally 53,578 Manchus, 17,355 Mongols, and 12,361 Chinese. Of the men from the Manchu and Mongol squadrons, 20 out of 89 were assigned duty as infantrymen. Of the men from the Chinese squadrons, 13 out of 47 were so assigned. Fang, 'Technique', pp.193, 208–09.

[38] Wakeman, *Great Enterprise*, vols 1–2, p.201.

A comparatively small number of soldiers of other ethnic backgrounds eventually also joined the banners. Among these were the aforementioned Albazinian bannermen, among them 45 illiterate cossacks with families who had surrendered at Albazin in 1685 and joined the banners. The Qing had vainly hoped to find somebody qualified to teach Russian; many of the new bannermen may have been Inner Asians in Russian service. There were also a few odd squadrons of the Eight Banners composed of 'New Manchus', meaning Mongolian-speaking Sibo that the Manchus had conquered in the 1640s, members of various Tungusic groups along the Amur, and Muslim bannermen from Turkestan.[40]

During the seventeenth century in particular, prisoners of war were frequently enlisted in new banner squadrons. This happened between 1600 and 1619 when soldiers of the tribal Hada, Hoifa, Ula, and Yehe were absorbed into the army. The procedure was repeated after the wars against the Mongols and Chinese in the 1630s. Nurgaci began his conquests with a small population, so captured enemy soldiers had to be used to replace losses and increase the army's strength. Earlier, they would have been brought home as slaves.[41]

For a short period between about 1618 and 1644 (although they were first mentioned in the sources in 1622), there were indeed special companies of soldiers with the status of state slaves (*sinjeku*). These were originally Chinese



Banner cavalry of the Bordered White Banner. (Anon.)

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[39] Rawski, *Last Emperors*, p.129.

[40] Crossley, *Manchus*, pp.81, 102, 104, 213–14; Rawski, *Last Emperors*, p.242; Mancall, *Russia and China*, p.133.

[41] Fang, 'Technique', p.202.

soldiers captured when the roughly 1,000-strong Ming garrison in the town of Fushun surrendered in 1618.[42]

For an even briefer period, the Qing military even included a unit of former Portuguese black slaves from Macao. Being described as 'Negroes of different nations' who had escaped slavery by moving into Canton, they were probably a mixed group of dark-skinned, reportedly Christianised Africans and South Asians. At the beginning of the conquest, there had been more than 300, but, upon the fall of Canton to the Manchus, only perhaps about 200 remained. These men then joined the Qing forces as a single unit. They took part in the fighting against pirates and Ming loyalists in the south, but nothing is known about their armament.[43]

Number of Bannermen

Not only is it difficult to ascertain the field organisation of the banner armies, but it is also very hard to estimate their numerical strength. The potential paper strength of a banner in the mid-Qing period bears little, if any, relevance either to the early banners used in the wars of conquest or the units actually fielded in times of war. In fact, the paper strength tells us little about the real strength of the armies at any time in the period. It is unlikely, to say the least, that any banner field force ever reached the full paper strength of its parent units. Nonetheless, most historians have tried to estimate the total number of bannermen (not merely those on active duty), reaching results ranging from 144,000 to 180,000 men.[44]

By 1644, the bannermen were divided into 563 squadrons, which would give a total paper strength of 168,900 men.[45] Some must have been half-squadrons. Moreover, the strength of the squadron had not yet stabilised at 300 men, so, in fact, the number tells us little. It may be prudent to estimate the total number of available bannermen at the time of the invasion of China as at most about 120,000–150,000 men, certainly no more and very likely less. Of those, it would be surprising if as many as a third actually took part in the invasion. It should be remembered that the army Nurgaci raised in 1618 was said to number only 10,000 men, which, in itself, is a large force for a small state.[46]

As for individual Manchu armies, they were generally small, at least with regard to the number of fighting men (who would bring servants possibly not included in the total numbers). The average army size seems to have increased later in the period. In approximately 1625, Nurgaci promised to despatch 8,000 bannermen to join the Khorchin in a war against the Chakhar Mongols.[47] In 1627, Hung Taiji sent a force of 2,000 men to join his Mongol allies on an expedition against the Chakhar.[48] Hung Taiji's field army that invaded China in 1629, laid siege to Peking for a month in early 1630, and then returned to Mukden in April the same year, after having left garrison forces in four captured cities, at its peak strength consisted of only 3,500–4,700 men. After his return, Hung Taiji sent a second force of 5,205 men to relieve the garrisons.[49] In 1634, Hung Taiji led a major army into Mongolia. For this, he called up 2,936 guards and 8,000 cavalry.[50] In 1660, the Chinese 'feudatory prince' Geng Jimao (in Qing service but technically not a banner officer) was sent to Fujian with approximately 10,000 men: 3,000 of his own soldiers and 7,000 Green Standards men (more on which below).[51] The first banner army despatched from Peking early in 1674 to fight Wu Sangui's rebellion consisted of about 11,000 men (although the total number of banner troops sent from Peking between 1674 and 1681 was over 50,000).[52] In response to the Oirat Mongol leader Galdan's attack on the Khalkha in 1687, the Kangxi emperor despatched an army of 2,500 men, although they admittedly only were meant to act in defence of the border.[53] In 1695, a detachment of Manchu and Mongol soldiers from Peking for the campaign against Galdan numbered only 3,470 men.[54] In 1696, the Kangxi emperor sent off three large strike forces in the war with Galdan, including a western army of 10,790 and a central army of 8,130 soldiers.[55] In 1697, the Kangxi emperor despatched two explicitly light and fast expeditionary forces against Galdan, consisting of 3,000 men each.[56] In 1715, the Manchu General Funingga had at his disposal 11,510 bannermen and Green Standards soldiers (out of whom 2,410 were earmarked for garrison duty) and 3,900 Muslim auxiliaries. In addition, he requested 3,000 Khalkha Mongol auxiliaries. However, he planned to divide this huge force into a main army of 8,000 men commanded by himself and two additional expeditionary forces of respectively 3,000 and 5,000 men, the first of which with orders to conquer Turfan and the second with orders to move towards Urumchi, both in what would become Sinkiang.[57] In 1718, the Kangxi emperor despatched an army of about 7,000 men (reportedly 2,000 Green Standards troops, a small number of Manchu bannermen, and up to '10,000' local soldiers, probably from Yunnan or Kokonor) to attack the Oirat Mongols in Tibet, but this force did not prove equal to the task and was defeated, so, in 1720, two fresh armies were sent into Tibet.[58] After the establishment of a protectorate there, a garrison of at first 3,000 Manchus, Mongols, and Chinese was left in Lhasa.[59] In 1720, Funingga again planned attacks on Turfan and Urumchi. He envisaged an expeditionary force of 3,000 men for the conquest of Turfan and another of 2,000 men for the Urumchi operation. The main army of 5,000 men would follow the Urumchi force as a reserve.[60] The army that was sent into Tibet in response to the uprising of 1723 consisted of approximately 2,000 Green Standards troops and about 1,000 soldiers from Yunnan. This force successfully put down the revolt.[61] In 1724, with a major campaign underway, Funingga had at his disposal 11,000 men divided into two armies. This was regarded as insufficient, so plans were made to move additional troops to the theatre of operations.[62] In 1729, two large armies were despatched against the Oirat leader Galdan Tseren (r. 1727–1745), one of which reportedly counted as many as 324 officers and 26,500 men and the other 17,300. However, in the action that finally took place, the Qing only managed to field 10,000 men of the latter divided in three divisions, the rest having been detached on garrison duty. Furthermore, the Qing army marched into a trap and was defeated by reportedly 20,000 Oirat troops (possibly an exaggerated number since few commanders would wish to report a defeat against less than truly overwhelming odds).[63]

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[42] Rawski, *Last Emperors*, p.171.

[43] Juan de Palafox y Mendoza [1600–1659], *History of the Conquest of China* (New Delhi: Deep & Deep, 1978), pp.148–50, 153. Palafox y Mendoza was a Spanish bishop who wrote the second European substantial work on the Manchu conquest, based on reports he received through Macao and Manila.

[44] Different historians reach different totals, and the numbers naturally vary for different years. See, for example, Fang, 'Technique', p.203; Crossley, *Manchus*, p.81.

[45] Fang, 'Technique', pp.204, 208–09. Others have suggested a total number of 592 squadrons, of which 164 would have been Chinese-martial, which would have represented as much as 40 percent of the conquest force. Crossley, *Translucent Mirror*, p.118.

[46] Crossley, *Manchus*, pp.71, 81, and *Translucent Mirror*, pp.118–19.

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[47] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.21.

[48] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.93.

[49] Fang, 'Technique', pp.199–200.

[50] Fang, 'Technique', p.200.

[51] Oxnam, *Ruling from Horseback*, p.133.

[52] Fang, 'Technique', pp.201–02.

[53] Peter C. Perdue, *China Marches West: The Qing Conquest of Central Eurasia* (Cambridge, MA: Harvard University Press, 2005), p.149.

[54] Fang, 'Technique', p.197.

[55] Jonathan D. Spence, *Emperor of China: Self-Portrait of K'ang-hsi* (New York: Vintage, 1975), p.19. See also the section on the Battle of Jaghun Modu, below.

[56] Spence, *Emperor of China*, p.22; Peter C. Perdue, 'The Qing Empire in Eurasian Time and Space: Lessons from the Galdan Campaigns', in L. A. Struve (ed.), *The Qing Formation in World-Historical Time* (Cambridge, MA: Harvard University Press, 2004), pp.71–73, and *China Marches West*, p.198.

[57] Eva S. Kraft, *Zum Dsungarenkrieg im 18. Jahrhundert: Berichte des Generals Funingga* (Leipzig: Otto Harrassowitz, 1953), pp.24–25.

In 1735, when the organisation had stabilised to some extent, the Peking garrison counted 1,155 squadrons, which gives a total paper strength of 346,500 men subject to military service.[64] However, few of these were on active duty. The number of bannermen actively involved in the eighteenth-century campaigns has been estimated as 120,000–150,000 men.[65] Even this figure is probably too high.

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[58] Petech, *China and Tibet*, pp.55–56; Barfield, *Perilous Frontier*, p.290; Perdue, *China Marches West*, pp.223, 234–35.

[59] Petech, *China and Tibet*, pp.68–69.

[60] Kraft, *Dsungarenkrieg*, pp.45–46.

[61] Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.160, 226–27. See also Petech, *China and Tibet*, pp.85–86.

[62] Kraft, *Dsungarenkrieg*, pp.104–11.

[63] Peter C. Perdue, 'Fate and Fortune in Central Eurasian Warfare: Three Qing Emperors and Their Mongol Rivals', in N. Di Cosmo (ed.), *Warfare in Inner Asian History (500-1800)* (Leiden: Brill, 2002), pp.383–84, and *China Marches West*, pp.252–54. The Oirat had formed a powerful nomad empire that was no trivial opponent. By c. 1680, the Oirat already had access to some light cannon. Galdan Tseren's predecessor Tsewang Rabdan (born 1643; r. 1697–1727) even formed an artillery corps: 200 men with cannon from 1716 produced under the supervision of a captured Swedish artillery officer, Johan Gustaf Renat. This corps did not survive the dissolution of the young Oirat state after the death of Galdan Tseren. See, for example, Sven Hedin, *Southern Tibet: Discoveries in Former Times Compared with My Own Researches in 1906–1908: Lake Manasarovar and the Sources of the Great Indian Rivers; from the Remotest Antiquity to the End of the Eighteenth Century* (Stockholm: Lithographic Institute of the General Staff of the Swedish Army, 1917), vol. 1, pp.253–61; Perdue, *China Marches West*, pp.305, 307.

[64] Fang, 'Technique', pp.208–09.

Only a minority of the bannermen were ethnic Manchus, even in many supposedly Manchu banners. The enrolment of Chinese-martial bannermen grew swiftly in the post-conquest decades, until the rebellion of the Three Feudatories caused a backlash of suspicion against the Chinese-martial. Already in 1649, a great part of the men, 75 percent, appear to have been ethnic Chinese. Another eight percent were Mongols, and only 16 percent were ethnic Manchus. In 1667, the proportions were 69 percent Chinese, about nine percent Mongols, and 22 percent Manchus. By 1723, the Manchu component had risen to 23 percent, the Chinese had declined somewhat further to 68 percent, and the percentage of Mongols remained the same. After the Kangxi period, the number of Chinese-martial declined further. The exact numbers are by no means certain, although the general trend is clear.[66]

Revenues and State Control

Command of the banners was eventually separated from the princes altogether, and a state council nominated imperial appointees as commanders. Funds for the consistently expensive maintenance of the Qing army were provided by the imperial Board of Revenue (*Hubu*). The Qing military forces did not come cheap. It has been estimated that, in the eighteenth century, the regular annual costs of maintaining the banners and the Green Standards consumed more than a quarter of the total annual revenue of the Qing empire.[67]

When the wars of conquest were over, the banner units were deployed in garrisons. More than half were in Peking itself, where they formed a large proportion of the total population, and in the 25 posts in the metropolitan province of Zhili (around Peking, by 1825, altogether about 16,000 soldiers) that formed a defensive barrier aimed towards the north and north-west and protected the approaches to the capital.[68]

Other garrisons, altogether some 50,000 men in about 20 widely separated posts, with few exceptions no larger than some 3,000 men, were also stationed in larger provincial capitals such as Nanking, Chengdu, Fuzhou, which housed a garrison of both banner soldiers and Chinese marines, and in strategically important locations such as Chinkiang (Zhenjiang), which formed part of the Yangtze (Yangzi) defence line because the Grand Canal intersects the Yangtze River there, Hangzhou, which was important for coastal security, and Canton, which also was the home of a naval force. Others were stationed in the Manchu native lands, where at least 36,000 of all bannermen were based in the eighteenth century, divided into 43 scattered posts in the frontier region and 20 posts in Liaodong.[69] The garrison in Canton remained exclusively Chinese-martial until the eighteenth century.[70] The provinces Anhui, Jiangxi, Hunan, and Guangxi had no banner garrisons but had Manchu military commanders. Only the provinces Guizhou and Yunnan had neither Manchu soldiers nor commanders.[71] Garrisons continued to be established until the late 1730s. Their total number eventually stabilised at around 106, not counting those in Turkestan (about 12,000–15,000 men in six posts) and Tibet, which were under separate military administrations. In Turkestan, there was a garrison at Ili (Yili) of 'New Manchus' recruited from the Sibo in northern Manchuria.[72]

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[65] Crossley, *Manchus*, p.81; based on Fang, 'Technique', pp.208–09.

[66] Susan Naquin and Evelyn S. Rawski, *Chinese Society in the Eighteenth Century* (New Haven, CT: Yale University Press, 1987), pp.4, 141; Crossley, *Manchus*, p.86, and *Translucent Mirror*, p.119 n.65.

[67] Albert Feuerwerker, *State and Society in Eighteenth-Century China: The Ch'ing Empire in Its Glory* (Ann Arbor: University of Michigan Center for Chinese Studies, 1976), p.94.

[68] Sir Thomas F. Wade, 'The Army of the Chinese Empire: Its Two Great Divisions, the Bannermen or National Guard, and the Green Standard or Provincial Troops; Their Organization, Locations, Pay, Condition, &c', *The Chinese Repository*, 20:5–7 (May–July 1851), pp.314–16; Feuerwerker, *State and Society*, p.55; Ralph L. Powell, *The Rise of Chinese Military Power 1895-1912* (Princeton: Princeton University Press, 1955), p.9.

The bannermen had to settle in permanent garrisons and adjust to garrison life. In China, the bannermen were soon divided into garrison squadrons, stationed in major cities and in strategic locations; inner or household squadrons, attached to the households of the emperor and the imperial clan; and outer squadrons that supplied combat troops.[73]

Inner and Outer Banners

Bannermen of all banners were divided into two groups: those stationed in the capital (*jingqi*) and those stationed in the provinces (*zhufang baqi*). The latter, as noted, consisted of garrisons divided into garrison squadrons (*zhufang zuoling*). When not at war, their tasks included the guarding of major cities, important border regions, and strategic transportation routes.

Those in the capital were personally attached to the emperor and constituted the main battle force of the Manchu empire. Their organisation was far from straightforward, as it had fundamentally grown out of the early banner organisation rather than being the result of a deliberate organisational reform. First, the troops were divided into the Inner Banners (Manchu: *dorgi gūsa*; Chinese: *neiqi*) and Outer Banners (Manchu: *tulergi gūsa*; Chinese: *waiqi*), each in turn subdivided into separate squadrons referred to as 'inner squadrons' (*nei niru*) and 'outer squadrons' (*wai niru*), respectively. The Inner Banners or household troops guarded the imperial palace, and those among them who belonged to the Upper Three Banners constituted the Imperial Guard (*qinjunying*).[74] The imperial guardsmen (Manchu: *gocika hiya* or *gocika bayara*; Mongolian: *jasaghul-yin*; Chinese: *shiwei qinjun*) were selected men of Manchu, Mongol, or Chinese-martial origin. During the time of Nurgaci, they consisted of bond-servants, younger brothers and sons of important allies, kinsmen, and outstanding soldiers. They were then known in Manchu just as '*hiya*' (guard, aide) and functioned, as the name suggests, as bodyguards, aides, and messengers. Hung Taiji reorganised them into a select military unit with an internal command structure that consisted of ranks of three grades (more on which below). He continued to recruit bond-servants and imperial kinsmen, as well as descendants of those who had served Nurgaci into the unit. After 1644, sons of banner officers were recruited as well, but, from the 1650s, most imperial guardsmen were bannermen from the Upper Three Banners, nobles, and imperial kinsmen.[75] In the mid-seventeenth century, the number of imperial guardsmen was about 200. By the late nineteenth century, and perhaps ever since the late seventeenth century, the Imperial Guard consisted of about 530 men.[76]

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[69] Feuerwerker, *State and Society*, p.55; Naquin and Rawski, *Chinese Society*, p.206. For figures from 1825, when numbers had been increased, see Wade, 'Army of the Chinese Empire', pp.254, 319, 324–27.

[70] Kaye Soon Im, *The Rise and Decline of the Eight-Banner Garrisons in the Ch'ing Period (1644-1911): A Study of the Kuang-chou, Hang-chou, and Ching-chou Garrisons* (Ann Arbor, MI: University Microfilms, 1981), p.19; Crossley, *Translucent Mirror*, p.120 n.68.

[71] Wade, 'Army of the Chinese Empire', p.253.

[72] Wade, 'Army of the Chinese Empire', pp.321–23; Feuerwerker, *State and Society*, p.55; Crossley, *Manchus*, p.81; Hucker, *Dictionary*, p.91.

[73] Hucker, *Dictionary*, pp.91–92.

Those men of the Inner Banners who were not imperial guardsmen were organised into several units (*ying*) commanded by general commandants (Manchu: *tui janggin*; Chinese: *tongling, zongtong*), who often were imperial princes. These units included the two vanguard regiments (Manchu: *gabsihiyan i kūwaran*; Chinese: *qianfengying* or *qianjunying*) and the guards (literally 'flank') regiments (Manchu: *bayara i kūwaran*; Chinese: *hujunying*) that guarded the environs of the imperial palace, the firearms regiments (Manchu: *tuwa i agūrai kūwaran*; Chinese: *huoqiying*), and the two light commando regiments or 'elite sharp battalions' (Manchu: *silin dacungga kūwaran*; Chinese: *jianruiying*).[77] The last formation, established in 1749, can only be described as a commando unit. At first 300, ultimately 3,000 men, the formation consisted of elite soldiers who were specially trained in scaling walls and the use of assault ladders, so-called 'cloud ladders', with which they practiced six times a month, martial arts of various kinds, horsemanship, boat handling, and marksmanship with bow and matchlock.[78]

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[74] Hucker, *Dictionary*, p.91.

[75] Rawski, *Last Emperors*, pp.82–83.

[76] A. E. J. Cavendish, 'The Armed Strength (?) of China', *Journal of the Royal United Service Institution*, 42 (1898), p.708.

[77] Hucker, *Dictionary*, p.92. The *huoqiying* was established in 1691. The Qing were then in the process of centralising the use and supply of firearms, which had begun in 1688 with the creation of the Office of Firearms and Glaive-Trained Formations (*huoqi jian lian dadao ying yamen*), which had jurisdiction of all firearms and controlled specially trained assault units. Di Cosmo, 'Did Guns Matter?', p.155. When serving as part of the escort of the emperor, the uniform of the *huoqiying* was 'stone-blue' (deep blue-black) edged in white, with the officers wearing yellow edged in white, and the commander a jacket entirely yellow. Wade, 'Army of the Chinese Empire', pp.264–66 (vanguard and guards regiments), 276.

[78] Wade, 'Army of the Chinese Empire', pp.262–63, 274–75. By the early nineteenth century, the *jianruiying* also included 40 Chinese marines from Fujian province and a 60-man unit of non-Chinese, native cavalry from the north-west frontiers of Sichuan. When serving as part of the escort of the emperor, the soldiers of the unit wore yellow jackets edged in blue, the officers, blue jackets edged in yellow, and the regimental commander, a jacket entirely yellow.

The division between imperial guards and (originally princely) guards (among the Manchus, any guard unit was known under the generic name '*bayara*') had its origin in the fact that the banners were originally composed of bond-servants (Manchu: *booi*, 'people of the house'; Chinese: *baoyi*). The bond-servants of the Upper Three Banners, that is, of the imperial clan, were attached to the imperial household and those of the Lower Five Banners to the various princely houses. By 1636, bond-servants were enrolled in separate units within the banners. From the time of Hung Taiji, outer squadrons would include both bond-servants and free men, although the bond-servants could not rise above the rank of private. The inner squadrons, when consisting exclusively of bond-servants, were also referred to as 'bond-servant squadrons' (*booi niru*). Their duties, especially early in the Qing period, included the guarding of workshops, storerooms, and the sleeping chambers of the imperial consorts, and the squadron commanders (Manchu: *booi da*; Chinese: *zuoling* or *guanling*) were directly responsible to the emperor. Such officers were also assigned to manage the affairs of an emperor's grown sons, consorts, and the empress dowager in the palace and especially while travelling. Bond-servants of the Upper Three Banners could also serve individually in the guards regiments (*hujunying*) and the vanguard regiments (*qianfengying*). They could become officers, take the civil examinations, and, if so, enter the bureaucracy.[79]

Office of Imperial Guards

The imperial guardsmen were commanded by a group of civil-military officers from the Office of Imperial Guards. As noted, Hung Taiji ranked them into three grades. From 1652, the highest of the three grades of Imperial Guard commanders was the rank of Imperial Guard Commander and Inner Grand Minister (Manchu: *hiya kadalara dorgi amban*; Chinese: *lingshiwei neidachen*). Their number could vary, but they were nominally six, two from each of the Upper Three Banners. These men, personally selected by the emperor, enjoyed a rank equivalent to the top civil service rank and thereby surpassed banner generals in dignity. They were in charge of all daily activities of the Imperial Guard. Below them came the Inner Grand Ministers (Manchu: *dorgi amban*; Chinese: *neidachen*), equivalent in rank to that of banner general. Again, their nominal number eventually became six, two from each of the Upper Three Banners.

The lowest rank within the Office of Imperial Guards was that of Assistant Grand Minister (Chinese: *sanzhi dachen*). They had few, if any, administrative responsibilities, and the rank tended to be conferred on imperial kinsmen (the Aisin Gioro clan), Mongols who married into the imperial family, descendants of Mongol or Manchu heroes of the early wars of conquest, whether these had been imperial kinsmen or mere bond-servants, and worthy officials.[80] Their rank appears to have corresponded to that of lieutenant general. These men, the most select group of imperial guards, have often been referred to as 'Imperial Bodyguards' in Western sources. Especially in the early years of the Qing, the Imperial Bodyguards thus formed a very elite unit of men who served in individual positions of responsibility. They were, for instance, in times of need put in command of military ad hoc formations, placed in the vanguard in battle, where they carried messages between the commander-in-chief and the field units, or, when needed, took the place of a fallen commander. They were also employed in reconnaissance, intelligence gathering with regard to strategic issues, as imperial emissaries on diplomatic missions, and as escorts for important members of the imperial house. On certain occasions, they adjudicated bureaucratic disputes in the provinces and investigated cases of grave corruption. Due to their high rank, Imperial Bodyguards always outranked other guards, in the same way as ordinary members of the Imperial Guard always outranked members of the (originally princely) guards. In the later years of the Qing, however, as bureaucratisation increased, these ranks became more of sinecure appointments granted to favoured members of the court.[81]

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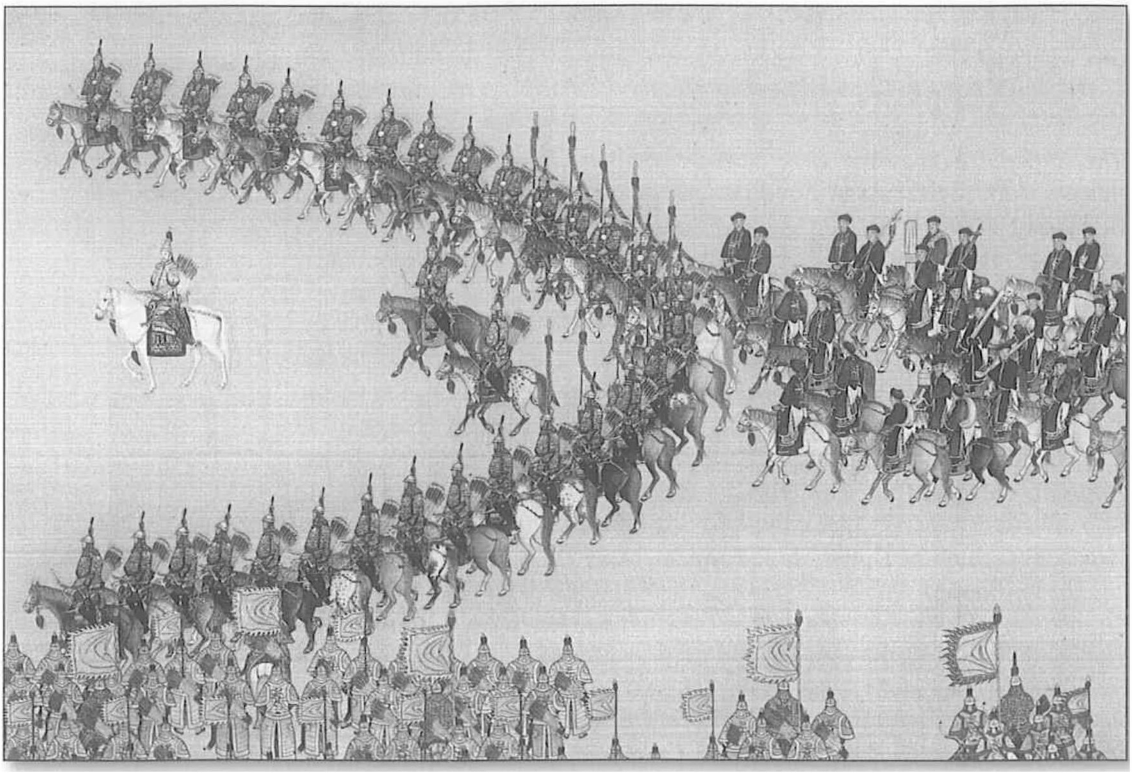
[79] Wade, 'Army of the Chinese Empire', pp.307–09; Ch'en, 'Creation', pp.12–13; Wakeman, *Great Enterprise*, vols 1–2, p.161 n.12; Rawski, *Last Emperors*, pp.84, 167, 171.

To ensure the loyalty of the Imperial Guard and the security of the imperial palace, the Kangxi emperor created two additional elite guards units



The Qianlong emperor and the Imperial Guard. (Giuseppe Castiglione) that were technically not part of the Imperial Guard and thus did not fall under the purview of the Office of Imperial Guards. The first was that of the guards of the antechamber (*yuqian shiwei*), commanded by men known as 'adjutants general' (*yuqian dachen*). These men, usually four in number, were personally selected by the emperor as a rule among the sons of Manchu and Mongol princes and imperial kinsmen. The adjutants general served in shifts around the clock in direct attendance upon the emperor. Although they were men of some influence due to their close contact with the emperor, they were not included in the military or civil ranking system and thus did not form part of the regular military forces. The Kangxi emperor also established the special elite unit known as the 'guards at the Qianqing Gate' (*Qianqingmen shiwei*), which was responsible for the security of the inner court of the imperial palace in Peking. The men of this unit were selected among outstanding bannermen from the Upper Three Banners, the sons of princes, and imperial kinsmen. In addition to their regular duties, and because of their direct allegiance to the emperor, men of both these units were, at times, also despatched on special missions, acting as the emperor's eyes and ears.[82]

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[80] For further details, see Wade, 'Army of the Chinese Empire', p.256.

[81] Wade, 'Army of the Chinese Empire', p.260; Hucker, *Dictionary*, pp.91–92; Rawski, *Last Emperors*, pp.82–85. As an example of the activities of the Bodyguards, the Kangxi emperor sent four skilled Manchu horsemen to keep an eye on his emissaries Jerken and Fudari, who

Peking Bannermen

The Outer Banners, in the early days of the Qing the main battle force of the empire, were organised into a large, predominantly cavalry formation of up to 24 line regiments (Manchu: *aliha cooha*; Chinese: *xiaoqiying*, 'valiant cavalry') commanded in annual rotation by the banner commanders (*dutong*).[83]

The bannermen in Peking formed a substantial standing force, in 1690, as noted, with a nominal strength of no less than 83,294 men, divided as follows:[84]

- • Imperial Guard regiments – 1,594[85]
- • Two vanguard regiments – 1,594
- • Eight guards ('flank') regiments – 13,549
- • Eight Chinese firearms regiments – 8,942
- • 16 cavalry regiments – 36,662
- • Chinese infantry corps – 3,419
- • Infantry corps or gendarmerie – 15,940
- • Armourers and maintenance – 1,594.

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were sent to negotiate with Wu Sangui. These four horsemen were presumably bodyguards or at least men from one of the other guard units. Spence, *Emperor of China*, p.38.

[82] Rawski, *Last Emperors*, pp.83–86.

[83] Hucker, *Dictionary*, p.92.

[84] Fang, 'Technique', pp.198–99.

[85] This number probably included the guards of the antechamber and the guards at the Qianqing Gate in addition to the Imperial Guard proper.

These numbers and respective share of men remained fundamentally the same until the late nineteenth century. By 1825, when the number of bannermen had increased, the nominal strength of the Peking bannermen was 95,792 men, divided as follows:[86]

- • Imperial Guard regiments – 2,957[87]
- • Two vanguard regiments – 1,924
- • Eight guards ('flank') regiments – 15,274
- • Firearms regiments – 6,461
- • Cavalry regiments – 39,682
- • Light commando regiments – 3,281
- • Infantry corps or gendarmerie – 23,716
- • Armourers and maintenance – 2,497.

Bannermen also came to provide the personnel for the Peking gendarmerie (Manchu: *yafahan coohai kūwaran*; Chinese: *bujunying*), established in 1673 and, by the mid-nineteenth century, a nominally 33,000-strong force that guarded the 16 gates of the Inner and Outer cities and patrolled the residential districts of Peking. In reality, the gendarmerie by then does not seem to have numbered more than 12,000–15,000 men. They were formed into battalions and brigades in a similar way to the Green Standards (more on which below), and, by 1825, 10,000 of the gendarmes were indeed Chinese of the Green Standards.[88]

Bannermen stationed in the provinces were under the supervision of the Board of War (*Bingbu*).[89] If called out for active duty, the bannermen served in garrison units of varying size. The entire garrison was generally called up as one force. Those of 3,000 or more were usually commanded by a general (*jiangjun*). Smaller forces of about 1,000 bannermen were commanded by lieutenant generals (*fu dutong*). Yet smaller units were commanded by brigadiers or garrison commandants (*chengshouyou*; *chengshouwei*), colonels or deputy commandants (*xieling*), post commandants (*fangshouwei*), or, in case of minor posts, by majors (*fangyu*). As has been shown, not all bannermen served on horseback, and their organisation in the field had little resemblance to the original banner organisation.[90]

It must again be emphasised that the banner was primarily a social unit. Every adult Manchu was entitled to belong to one of the Eight Banners. Every bannerman was entitled to share in the benefits of his banner. In peacetime, the bannermen received monthly stipends of rice and silver coin. In times of war, this was supplemented with booty. Although the pay in peacetime was small, the bannermen might also receive pay as members of the military forces organised from the bannerman population. Although the bannermen had lands assigned to them, these lands were kept scattered so that the banners did not become territorial units.[91]

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[86] Wade, 'Army of the Chinese Empire', pp.254, 262–63 (for similar but not quite corresponding figures), 300. The figures for the gendarmerie consist of bannermen only. An additional 10,000 Chinese Green Standards troops, not included in this figure, had been brought into the gendarmerie by then.

[87] This number again probably included the guards of the antechamber and the guards at the Qianqing Gate in addition to the Imperial Guard proper.

[88] Of the Green Standards soldiers, 4,000 held the rank of cavalryman, but this did not necessarily mean that they served as cavalry. Wade, 'Army of the Chinese Empire', pp.254, 300–01, 366; Rawski, *Last Emperors*, p.26.

[89] On the Board of War, see Wade, 'Army of the Chinese Empire', pp.310–13.

[90] Richard J. Smith, 'Chinese Military Institutions in the Mid-Nineteenth Century, 1850–1860', *Journal of Asian History*, 8:2 (1974), p.139 n.58; Hucker, *Dictionary*, p.92.

The bannermen were never commanded by Chinese generals before the nineteenth-century Taiping War. This was not only a matter of policy. Fluency in Manchu was encouraged among the troops and enforced among the officers as written military orders were transmitted in Manchu for security reasons. Few Chinese could read the Manchu letters. Likewise, the Manchu spoken language was used for verbal military orders. The Manchu language was also used to protect communications with regard to diplomatic relations with Mongols, Inner Asians, Russians, and Tibetans, as well as those pertaining to internal affairs of the imperial lineage.[92]

The last time large numbers of bannermen took part in a campaign as efficient and highly motivated soldiers was during the conquest of Turkestan between 1755 and 1759. Until the occupation of Turkestan, the militarily active portion of the banner population had been as mobile as the front itself, constantly moving as the needs of war dictated. After this last campaign, however, they were settled in garrisons throughout the country, where the rank and file gradually fell into poverty and eventually assimilated among their Chinese neighbours. The decades of peace after the wars of conquest gradually destroyed the bannermen as a fighting force. The reason was as much poverty among the ranks as excessive privileges and corruption within the officer class. By the end of the eighteenth century, their total numbers had swollen to 1,500,000 men, few on active service and most remarkably unsuitable for the rigours of war.[93]

Tiger Men

The most specialised formation of infantry in the Qing armies was the tiger men. Tiger men were soldiers specially trained in the martial arts and especially the use of the shield. The most curious fact about the tiger men is that they were only called so in the West. In China, they seem to have been merely referred to as '*tengpai yingbing*', or 'rattan-shield soldiers'. As such, they were counted among the shield-bearers, a category that included all sword-and-buckler men.

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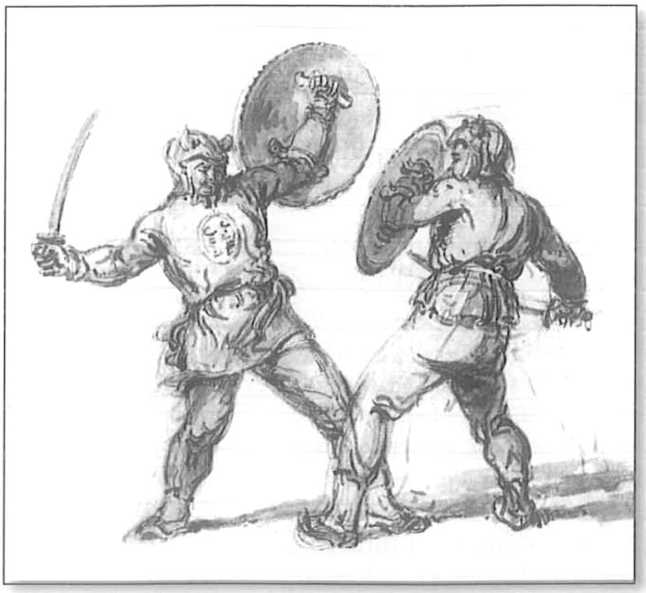
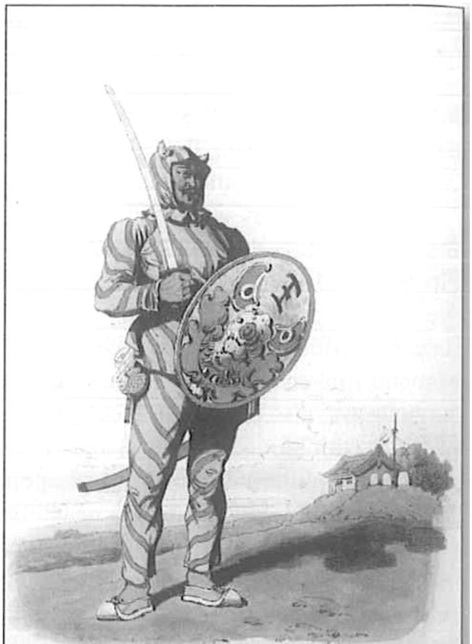
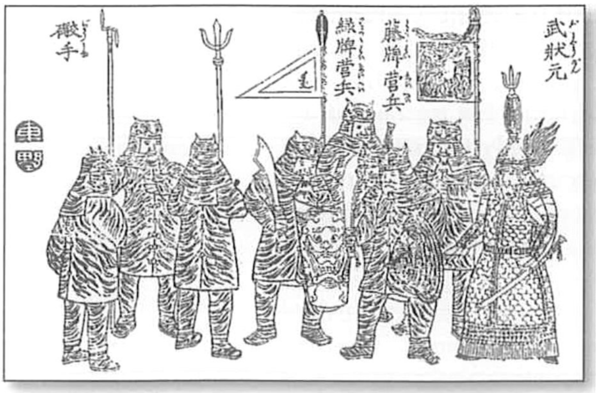
[91] See, for example, Crossley, *Manchus*, p.82; Fang, 'Technique', p.192 n.2.

[92] Crossley, *Manchus*, p.84; Rawski, *Last Emperors*, pp.13, 36–37.

[93] See, for example, Ooi Kee Beng, 'Den militära strukturen under Qingtiden', *Orientaliska studier*, 82 (1994), p.56; Crossley, *Manchus*, pp.153–54.



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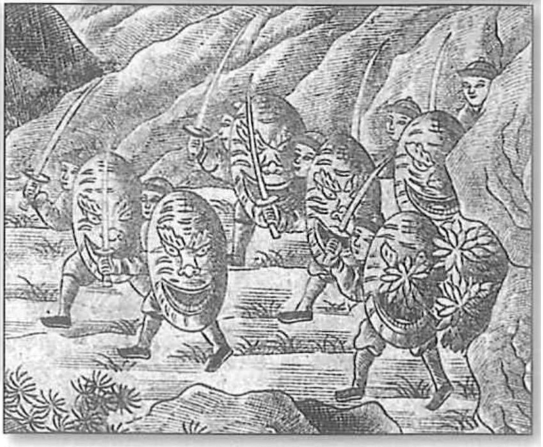
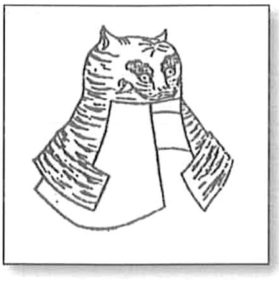
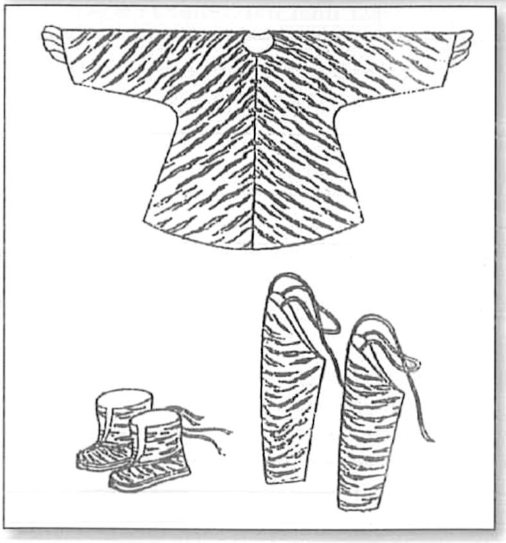
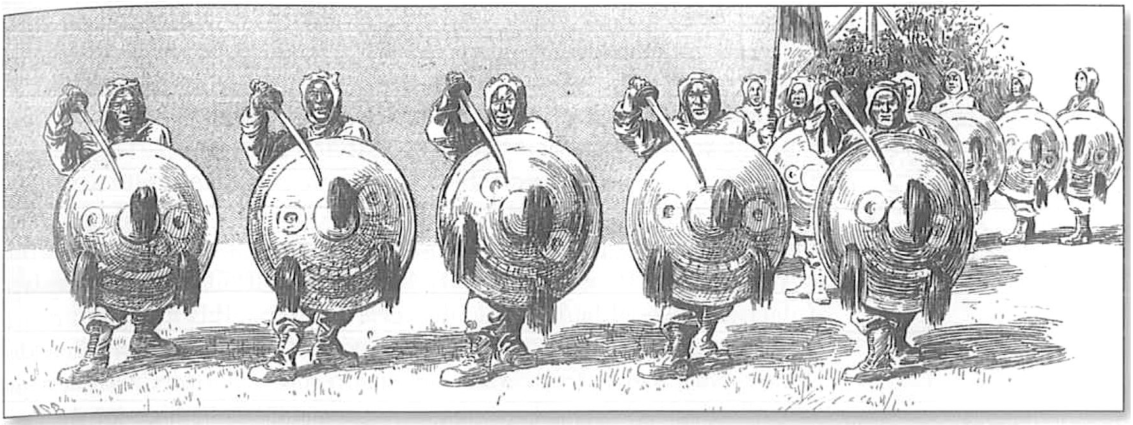


Tiger men, illustrated by (upper row) William Alexander, 1793, (above left) Okada Gyokuzan, *Morokoshi meishō zue* 4, 1806, and (above right) Jia Quan/Li Ming, the latter in action during the campaign in Taiwan, 1787. The 1787 illustration shows that not all Qing sword-and-buckler men were dressed as tigers.

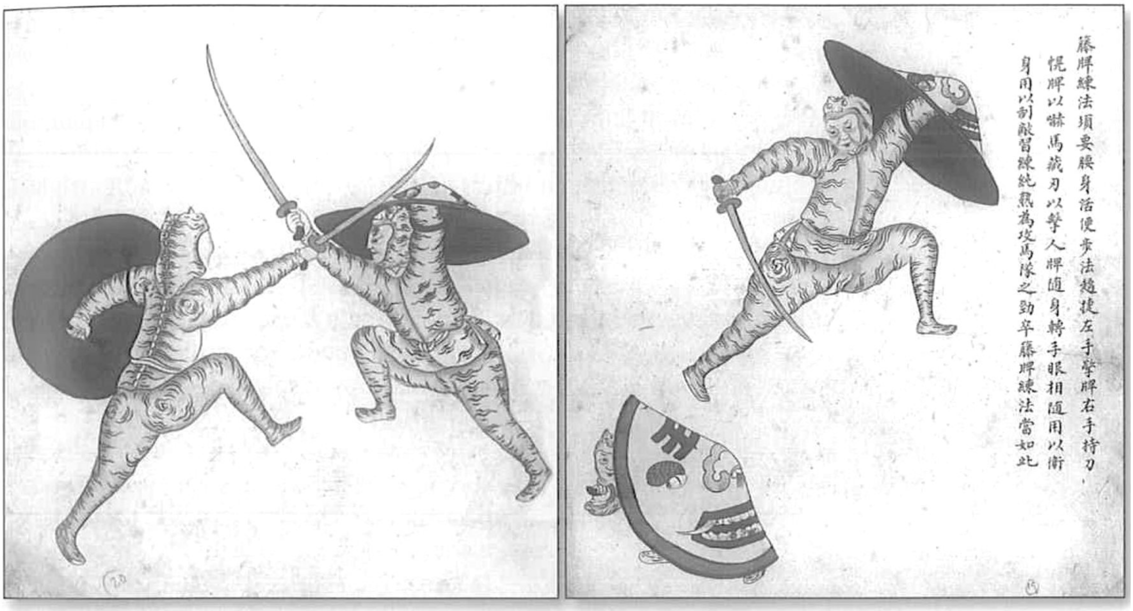


Tiger man garments. (Anon.)





Tiger men drill. Although drawn by a Western artist and with distinctly modern-looking footwear, Qing sword-and-buckler men are known to have drilled in this manner. (*Daily Graphic*, 15 October 1891)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Chinese depiction of tiger men drill. Qing sword-and-buckler men trained in the martial arts and, although scorned by late nineteenth-century Western observers, were formidable foes in traditional warfare. They were trained to stoop to defend and jump to attack. The text explains, 'The training of a rattan-shield soldier requires a supple waist, fast footwork, holding the rattan-shield in the left hand, holding the sword in the right hand, using the rattan-shield to scare the horses, hiding the sword to attack the enemy, rolling the rattan-shield, using hands and eyes together to defend the body and defeat the enemy; skillful training requires using powerful attacks against cavalry. This is the way to practice with the rattan-shield.' (*Bingji zhizhang tushuo*, 1843)

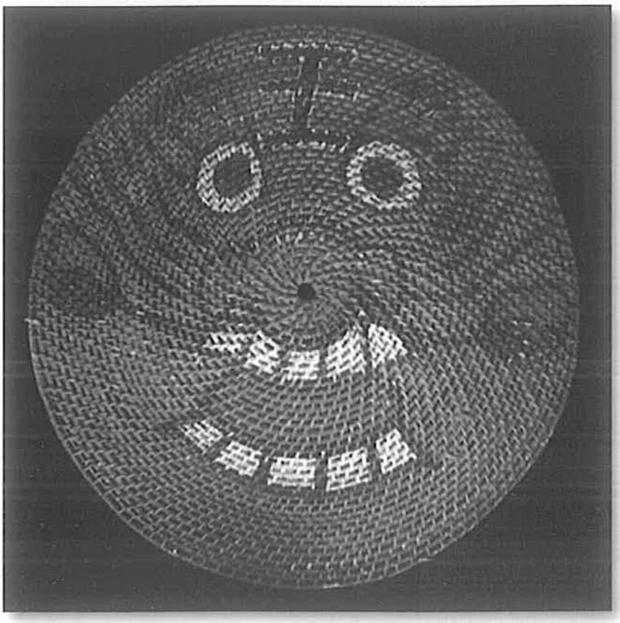
The tiger men not only trained in the traditional martial arts but also employed various ways to frighten the enemy, including the use of wild shouts, gesticulations, grappling hooks, and the scattering of fireworks or firecrackers. Their chief military task was to break up enemy cavalry charges. They also took part in the imperial hunts as beaters, driving the prey before them through similar tactics.

Tiger men first appeared in Ming China, where they seem to have developed out of either armoured or unarmoured sword-and-buckler men (both troop types existed) who were sent out to skirmish with the enemy. The Qing, too, retained some sword-and-buckler men. Not all of them were tiger men. At least 400 sword-and-buckler men from Fujian took part in the siege of Albazin in 1686. These probably formed part of a force of 500 such men earlier sent to the region. These soldiers were Chinese who had surrendered to the Qing and been incorporated into the banners.[94]

There is little doubt that cavalry horses unaccustomed to the displays of tiger men would be disturbed by their activities. This may have had a significant effect on some enemies, and it must be remembered that the Chinese often had to face cavalry opponents in the north. Their effect on the early Manchus may accordingly have been sufficiently high for them to have retained specialised tiger men even after the collapse of the Ming state. In the face of a charge of formed enemy cavalry, the tiger men would gather in small groups of from five or six to as many as 15 men to form a circle of their shields. Judging from the importance attached to this part of their training during military displays, one may assume that the cavalry horses would avoid these small groups of disciplined shield-bearers so that the tiger men would be able to disrupt the cavalry charge by suddenly leaping out among the horses.

Both the equipment and dress of the tiger man was designed to frighten the enemy. His brightly coloured and ferocious-looking dress – a long-sleeved yellow jacket with black stripes in the manner of a tiger skin, and a cloth helmet with ears made to resemble a tiger's head – was worn with matching trousers or leggings. The tiger man carried a large, circular, convex shield (*bo*) about one metre in diameter, made of seasoned, woven rattan, plaited bamboo, or perhaps occasionally wood, on which was painted the face of a tiger. One particular specimen in the Royal Armouries was made of bamboo with a metal boss, and its base colour remained the natural yellow of this material. The tiger stripes were painted black, the mouth, nostrils, and ears red, the teeth and eyebrows white, the eyes green, and the Chinese character *wang* (see below) on the forehead red with a black outline. Most cane shields appear to have been covered with cloth, while wooden shields were lacquered. Ming illustrations, if they can be trusted, even show shields with tiger-style 'ears' on top. Many shields are so grotesque in style that the beast face is only recognisable as that of a tiger because the Chinese character

Tiger man's shield, the metal boss of which is lost. (Anon.)'



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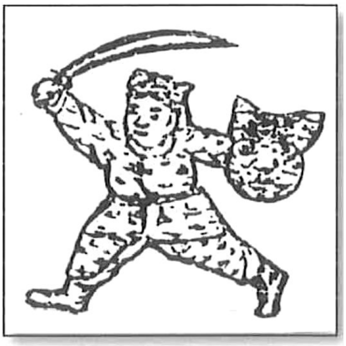
[94] Mancall, *Russia and China*, pp.137, 338 n.24.

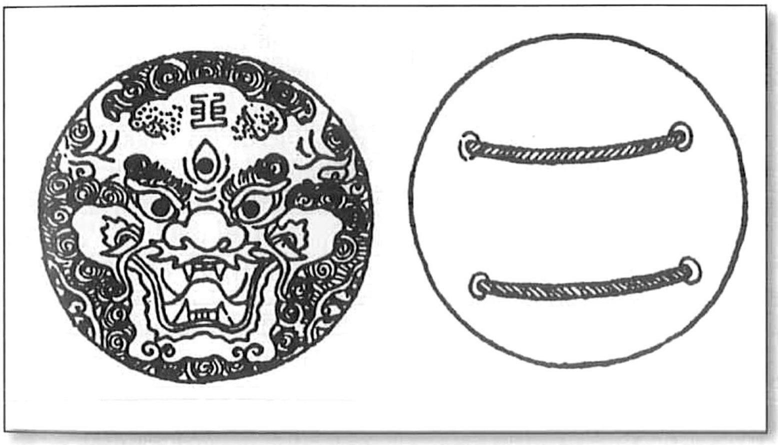
'*wang*' (king) is painted on its 'brow'. The tiger was considered to be the king of beasts as the lion is in the West.

In the Qing armies, tiger men continued to be specialised sword-and-buckler men. All seem to have been bannermen. By 1812, the whole eight Chinese-martial banners in Peking only provided 100 tiger men.[95] On the other hand, instructions for the triennial review in Peking still insisted upon a force of 688 tiger men recruited from the Chinese-martial banners.[96] Tiger men also took part in the Taiwan campaign of 1786–1788.[97] Being on foot, they do not seem to have been used much in the Qing wars in the north against mounted enemies, where chiefly cavalry armies were employed, although a few (30 among some 1,200 other soldiers) were seen in Turkestan in 1873.[98] When tiger men were fielded, they were deployed in a skirmish line preceding any formation of archers, matchlockmen, spearmen, cavalry, or artillery. There were never many tiger men. Among infantry, the ratio was approximately 1:70. Laurence Oliphant stated that there were about 20 tiger men ('a score or more') in each of four or five regiments he saw in 1858.[99] By 1812, at least, their total number was reportedly never in excess of 4,000, and, as far as can be ascertained, they formed part of the Tiger-Spear Battalion (*huqiangying*). This unit, established by the Kangxi emperor in 1677 from the best archers of the guards, served the emperor while he was in the imperial hunting grounds at Mulan.[100]

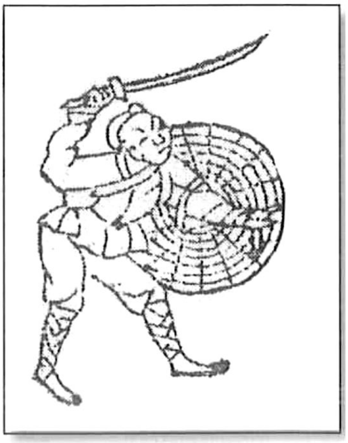
The dress and equipment of several mid-nineteenth-century tiger men have been preserved in various collections in the West. Surviving shields are of wickerwork, with a cane loop for the forearm and a straight wooden



Ming sword-and-buckler man, dressed as a tiger man. (Anon.)



Late Ming tiger shield. (*Gujintushujicheng*)



Sword-and-buckler man in Taiping War illustration. (Anon.)

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[95] Wade, 'Army of the Chinese Empire', p.269.

[96] Wade, 'Army of the Chinese Empire', pp.278–79.

[97] Marie-Catherine Rey (ed.), *Les Très Riches Heures de la Cour de Chine: Chefs-d'oeuvre de la peinture impériale des Qing 1662-1796* (Paris: Guimet/RMN, 2006), p.119.

[98] Ian Heath, *Armies of the Nineteenth Century: Asia 2: China* (Guernsey: Foundry Books, 1998), p.17.

[99] Laurence Oliphant, *Narrative of the Earl of Elgin's Mission to China and Japan in the Years 1857, '58, '59* (Edinburgh and London: William Blackwood and Sons, 1859), vol. 2, pp.429–30.

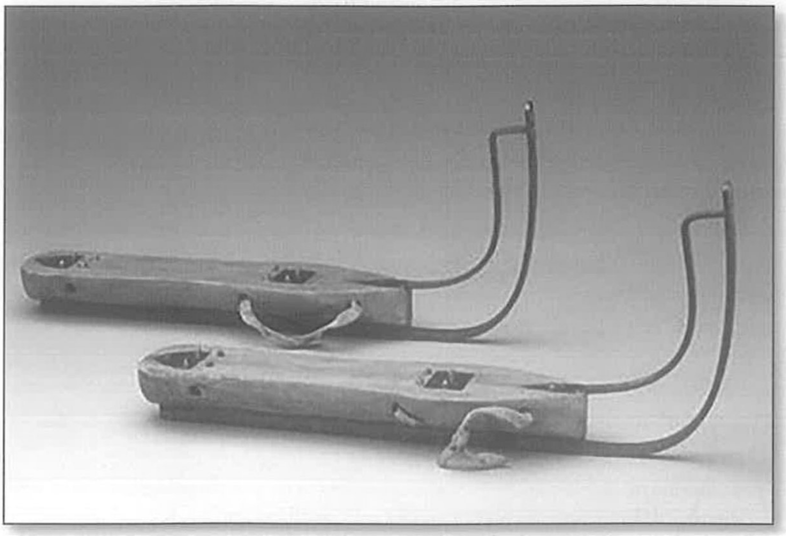
[100] Wade, 'Army of the Chinese Empire', p.329; Cavendish, 'Armed Strength', pp.708–09.

handgrip. The centre of the shield is decorated with a brass shield boss. The late Ming compilation *Gujintushujicheng* ('Collection of Old and New Books') includes a depiction of a round shield equipped with double enarmes for the left arm. Such a shield from the seventeenth century is of wood, about 0.67m in diameter, and painted in a decorative pattern. The shield used by a soldier in a mid-nineteenth-century Taiping War illustration is similarly equipped. We must assume that round shields came in different styles.

Ice Skating Battalion

One little-known unit of the Qing army was the specialist battalion of skaters. Manchu troops customarily regarded skating as both a pastime and a military exercise, and at least the Peking bannermen early in the period practiced not only skating per se but also archery and wrestling on skates and a variant of ice football. It is accordingly hardly surprising that a specialist battalion of skaters was formed. Known as the 'Eight Banner Ice Skating Battalion', it consisted of 1,600 bannermen. The battalion was mainly used in the north of the empire, where winters are long and rivers covered with ice for extended periods.[101] This specialist unit took part in the campaigns against the Russians on the Amur in the last quarter of the seventeenth century.

Manchu skates. (Anon.)



During the Jiaqing emperor's reign (1796–1820), the battalion of skaters was reduced to 500 soldiers and merged with another battalion. Henceforth, it was primarily used for displays during winter celebrations.

Green Standards

The Manchu leaders recruited their loyal Chinese-martial subjects to the Eight Banners. Following the conquest of China, other Chinese such as defeated or disaffected Ming soldiers, members of various local units, and Chinese volunteers were instead enlisted in the newly raised 'Green Standards' (Manchu: *niowanggiyan turun i cooha*; Chinese: *lü ying*). In the early years, these units functioned in much the same way as the banner forces and often

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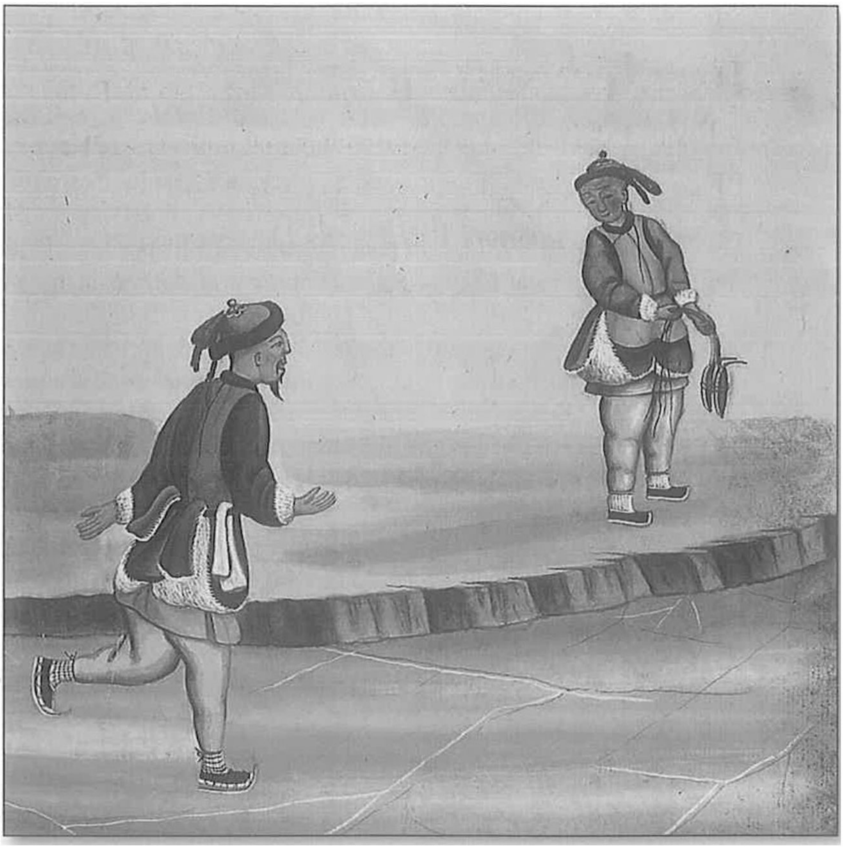
[101] J. R. ter Molen and E. Uitzinger (eds), *The Forbidden City: Court Culture of the Chinese Emperors (1644-1911)* (Rotterdam: Museum Boymans-van Beuningen, 1990), p.151.



Manchu civilians skating for leisure. (Anon.)

operated in conjunction with them. They also served as engineers in the building of bridges and fortifications and were usually put in the first line in battle, being somewhat more expendable than bannermen. Even so, there is little evidence that, at this time, the Green Standards troops were inferior to their Manchu and Mongol comrades-in-arms or were regarded as second-rate soldiers by the latter. In their reports, Manchu generals, such as the early eighteenth-century Funingga, did not distinguish between these troops but, unlike the case with tribal Mongols and local auxiliaries, counted them together as 'Manchu, Mongol, and Green Standards soldiers'.[102] Later on, when the wars of conquest were over, the Green Standards declined and fell increasingly into the role of auxiliary units or even rural constabulary. The Green Standards troops were organised in army and naval forces under both Chinese and Manchu officers. The Green Standards were organised by province into 18 separate provincial armies, one for each province, each under the nominal command of a general (Manchu: *fideme kadalara amban*; Chinese: *tidu*) stationed in the provincial capital or prefectural city and subordinated the civil governor or governor general, who usually assumed personal authority over the Green Standards. Lower-ranking officers stationed in the smaller cities and towns commanded small units spread throughout the empire, where they – unlike the bannermen – partly integrated with the local civil administration on all levels, their commanders forming a counterweight to the power wielded by the civil governors and governors general. The Green Standards soldiers cooperated with the civil officials and village headmen in maintaining order and were always more numerous than the bannermen. Although all Green Standards troops in a province were under the nominal command of the governor or governor

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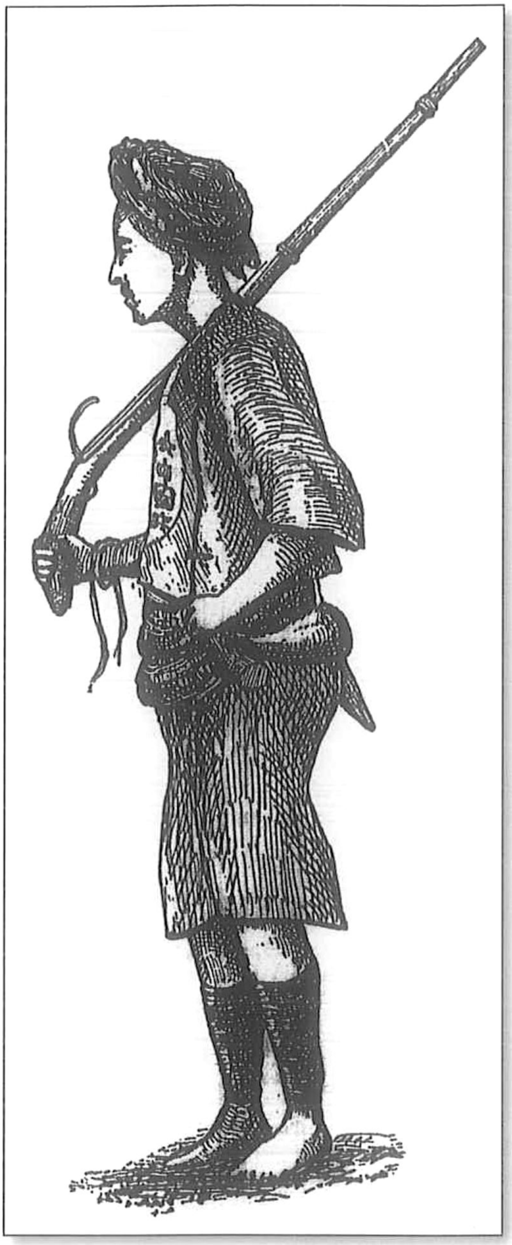
[102] Kraft, *Dsungarenkrieg*, p.25; Di Cosmo, 'Elephants', pp.7, 19, 21; Di Cosmo (trans.), *Diary*, pp.51, 60, 63, 66.



Soldier armed with matchlock. (Jones Lamprey, 1867)

general, these officials had direct control only over relatively small brigades. Even the provincial general (*tidu*) directly commanded only a somewhat larger brigade. However, none of the Green Standards commanders, from the provincial general down, was permitted to move units without the approval of the governor general or governor. The latter two were, in addition, only permitted to use their soldiers within the borders of their own province, and even such moves might be successfully opposed by local officials who did not wish to lose their constabulary and thus risk undermining law and order. In case of war, the Qing would therefore normally appoint a special imperial commissioner to command Green Standards troops mobilised from several garrisons in one or more provinces.[103]

The Green Standards were so named after the large triangular standard carried, always made of green satin with a scalloped edge representing flames. Late in the period, some units reportedly flew green standards with a border of red satin, and possibly standards with yet other borders existed, too. A golden dragon was embroidered in the centre. The colour green was chosen in accordance with the symbolic background of the colours used by the banners. Green, that is, azure, symbolised the east, which signified the native Chinese soldiers.

Green Standards troops were divided into three ranks: garrison infantrymen (*shou bing*), regular infantrymen (*zheng bing* or *bu bing*), and cavalrymen (*ma bing*). A new recruit would first be made a garrison infantryman, then promoted to regular infantryman, and, if able, then further promoted to cavalryman. A cavalryman should be expert with bow as well as matchlock, on foot and on horseback. When old age prevented him from riding and shooting properly, he was reduced in rank and pay to that of a regular infantryman. The rank of cavalryman was dependent on ability and experience, not on whether the soldier served on foot or on horseback. Garrison infantrymen were most common, while cavalrymen were least so, forming only a sixth of the total force (according to official figures) or perhaps even less. A number of the men in the coastal provinces, up to a third of available men, including some holding the rank of cavalryman, were enrolled in the naval forces.[104]

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[103] On the Green Standards, see, for example, Hucker, *Dictionary*, p.92; Feuerwerker, *State and Society*, p.57; Ian Heath, *The Taiping Rebellion 1851-66* (London: Osprey Publishing, 1994), pp.13–15.

Below the provincial level, soldiers were organised into brigades, regiments, battalions, and smaller units. Organisation and ranks frequently differed in different provinces and were, in any case, not directly related to either the banner organisation or the banner ranks. The basic unit of the Green Standards was the battalion (*ying*). There were four basic types of battalions: the infantry battalion of nominally 500 fighting men plus officers, the cavalry 'battalion' of nominally 250 fighting men, the garrison battalion of variable strength, and a unit known as the 'field' (*lian bing*) battalion, also of variable strength. Some infantry battalions were understrength, while others could number up to 1,000 men. Each battalion also had non-combatant coolies attached. By the late nineteenth century, a foreign military observer noted that the average strength was five officers, 300 men, and 150 coolies.[105]

Battalions were formed into brigades (*biao*, literally 'flag', or *zhenbiao*), each commanded by a lieutenant general (*zongbing* or more commonly *zhentai*), of which there were two or more to a province (about 66 in all of China proper), or territorial regiments (*xie* or *xiebiao*), each commanded by a major general (*fujiang*).[106] These higher formations had no fixed number of subordinate battalions.

The battalion was usually commanded by a brigadier (*canjiang*) or sometimes a colonel (*youji*), lieutenant colonel (*dusi*), or major (*shoubei*). These officers were all referred to as 'battalion officers' (*yingguan*). Under the battalion officers served officers known as 'company officers' (*shaoguan*). The battalion was subdivided into companies or patrols (*shao*), each commanded by a captain (*qianzong*, literally but no longer 'leader of 1,000 men') and in theory 100 men strong. The companies were often known as 'right' (*youshao*), 'left' (*zuoshao*), and sometimes 'middle' (*duanshao*) patrols, being thus from two to three in number per battalion. The company was subdivided into two or four platoons (*si*) commanded by first lieutenants (*bazong*). The platoons were finally divided into squads or tents (*peng*) of nominally 15 men: 10 soldiers and three coolies commanded by two non-commissioned officers, one of whom was a sergeant (*shizhang*). Private soldiers were, as noted, known as '*zheng bing*'. (For an overview of military ranks, see Table 3.) It should be noted that many high-ranking officers served as aides to higher officers instead of holding their own commands.[107]

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[104] Wade, 'Army of the Chinese Empire', pp.364, 396; Smith, 'Chinese Military Institutions', p.143; Siu Kwok-kin, *Forts and Batteries: Coastal Defence in Guangdong During the Ming and Qing Dynasties* (Hong Kong: Urban Council of Hong Kong, Hong Kong Museum of History, 1997).

[105] Cavendish, 'Armed Strength', p.714.

[106] Wade, 'Army of the Chinese Empire', pp.253, 364; Feuerwerker, *State and Society*, p.57. By 1849, the number of commands had increased to 43 *biao* and 72 *zhenbiao*.

[107] Wade, 'Army of the Chinese Empire', pp.364–65.

Military Ranks of the Green Standards

Mandarin Grade[108]	**Rank**	**Chinese Term**	**Position**
1 l	General	*tidu*	Provincial Commander
2 u	Lieutenant General	*zongbing*	Brigade (*zhen*) Commander
2 l	Major General	*fujiang*	Regimental (*xie*) Commander
3 u	Brigadier	*canjiang*	Battalion Officer (*yingguan*)[109]
3 l	Colonel	*youji*	
4 u	Lieutenant Colonel	*dusi*	
5 u	Major	*shoubei*	
6 u	Captain	*qianzong*	Company Officer (*shaoguan*)[110]
7 u	First Lieutenant	*bazong*	
8 u	Second Lieutenant	*waiwei qianzong*	
9 u	Warrant Officer	*waiwei bazong*	
–	Sergeant/Supernumerary	*shizhang*/*ewai waiwei*	
–	Private	*zheng bing*	

Titles such as captain, lieutenant, and sergeant are not really adequate translations, as captains and officers of lower rank were actually commanders of small, semi-independent detachments assigned to hold outposts called '*xun*' (posts), '*dun*', or '*bao*' (watchtowers, forts, or lookout stations).[111] The fact that the Green Standards were organised in small units indicates that they were chiefly used as a provincial constabulary on the post routes and for police operations against bandits. Except for the early years of the period, they generally lacked training as a striking force and seldom had the chance to train together as higher formations. This made them valuable to the local administration, and efforts from the imperial capital to gather the units of the various Green Standards in a time of crisis were often resisted by local administrators. Although the Board of War had the official control over these troops, their direct use was, as noted, generally possible only through the despatch of imperial commissioners empowered to assume control of them. Such a commissioner had the title of 'Grand Minister Commander' (*jinglüe dachen*) and was assisted by lesser dignitaries from the court known as 'Grand Minister Consultants' (*canyi dachen*).[112]

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[108] u = upper grade; l = lower grade.

[109] Of the battalion officers, the brigadier was the foremost battalion commander.

[110] Of the company officers, the captain was the foremost company commander, while the first lieutenant was the foremost platoon commander.

[111] Wade, 'Army of the Chinese Empire', pp.364–65.

[112] See, for example, Hucker, *Dictionary*, p.92.

In the days of the Kangxi emperor (1662–1722), the soldiers of the Green Standards consisted of about 594,000 men, a number that had increased, on paper at least, to approximately 630,000 men in 1764.[113] Between 1785 and 1825, the number of soldiers in the Green Standards fluctuated between around 585,000 and 660,000 men, divided into some 1,200 battalions, although not all were kept on active service. The largest Green Standards force of any single province was in Fujian (including Taiwan), counting more than 66,000 men in 1767. They were predominantly concerned with rebel uprisings in Taiwan during the 1720s and 1780s and the coastal pirate Cai Qian and his fleets in the late 1790s. In the north-west, almost one-fifth of the total Green Standards force was stationed in the provinces Shanxi, Shaanxi, and Gansu. Garrisons totalling between 10,000 and 23,000 men (including bannermen) were, from the 1760s, also stationed in Manchu-held Turkestan. In the south-west, more than 80,000 Green Standards soldiers were stationed, many of whom became pioneers in remote military colonies, marrying local tribal women. There were no bannermen garrisons there.[114]

Most Green Standards soldiers were recruited from families that had served in the army for generations. They were permanently attached to their garrisons and usually were natives of the region in which they served. After a campaign, the Green Standards troops would return to their native garrison. Their officers, on the other hand, who could be Chinese or Manchus, were regularly transferred from unit to unit by the Board of War.[115]

Naval Forces

The Manchu empire had no national navy. Few of its military officers had a real understanding of naval warfare. Naval strategy was mostly regarded as but little different from ordinary piracy. As long as some local forces were available to suppress the occasional act of piracy, the sea borders were held to be intact. The Manchu empire was not a major sea power, and, in particular, the South China Sea was infested with pirates.[116]

Yet the Manchus neither neglected nor ignored the maritime frontier. They already made contingency plans for naval operations during the invasions of Korea and Ming China and occasionally discussed calling up Korean fleet elements when naval action was expected. Manchu commanders used a fleet for the subjugation of Taiwan.

The first Manchu naval forces were, unsurprisingly, established in the north. Early in 1644, the Shunzhi emperor ordered the construction of a naval base in Dengzhou in Shandong province. Initially, the naval base had 386 sailors and 13 warships. By 1704, another 1,200 sailors and seven new warships had been added to the Dengzhou base. In 1706, yet another naval base was established at Jiaozhou.

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[113] Wakeman, *Great Enterprise*, vols 1–2, pp.480–81; Powell, *Rise of Chinese Military Power*, pp.12–13.

[114] For further details from 1825, see Wade, 'Army of the Chinese Empire', p.255.

[115] Feuerwerker, *State and Society*, p.56.

[116] See, for example, Dian H. Murray, *Pirates of the South China Coast, 1790-1810* (Stanford, CA: Stanford University Press, 1987), and 'Living and Working Conditions in Chinese Pirate Communities, 1750-1850', in D. J. Starkey, E. S. van Eyck van Heslinga, and J. A. de Moor (eds), *Pirates and Privateers: New Perspectives on the War on Trade in the Eighteenth and Nineteenth Centuries* (Exeter, Devon: University of Exeter Press, 1997), pp.47–68.

In Liaodong, on the other side of the Bohai Gulf, the Shunzhi emperor established a naval base for 10 warships in Lüshun (later Port Arthur) in Fengtian province. In 1676, the Kangxi emperor called up 16 naval generals and 500 soldiers to serve in the Lüshun base. In 1714, he developed the Lüshun naval base further, ordering artisans in Fujian to build six additional warships for the Lüshun fleet – the first time a Manchu ruler used warships constructed in the south to carry out operations in the north.

Finally, in 1726, the Yongzheng emperor established the Zhili naval base in Tianjin to protect the approaches to Peking. By then, naval forces had also been formed in southern China.[117]

Qing naval forces were regarded as an integral part of the army. The 'Naval Forces of the Green Standards' (*lü ying shuishi*) were responsible for coastal defence. Their main duty was to defend the ports against pirates. The naval forces took turns patrolling the coastal waters, working on a six-month shift. Inland waterway units took turns quarterly, patrolling the rivers. Chinese soldiers had considerable experience in riverine combined operations, and this was one of the traditional strengths of the Green Standards.[118]

Naval units were organised in fundamentally the same manner as other Green Standards. In each coastal province, the naval forces were commanded by a lieutenant general of naval forces (*shuishi zongbing*) or, in the case of those provinces most severely afflicted by piracy, a general of naval forces (*shuishi tidu*). The general or lieutenant general commanded a headquarters brigade (*tibiao* or *zhenbiao*) of several battalions and with several attached vessels. Remaining battalions were, as in the regular Green Standards organisation, formed into naval regiments (*xie*), each commanded by a major general of naval forces (*shuishi fujiang*). These higher formations had no fixed number of subordinate battalions. A major general could alternatively be appointed as aide to a governor general.

The naval battalion was usually commanded by a brigadier (*shuishi canjiang*) or sometimes a colonel (*shuishi youji*), lieutenant colonel (*shuishi dusi*), or major of naval forces (*shuishi shoubei*). These officers were all referred to as 'battalion officers' (*yingguan*). Alternatively, the brigadier could be appointed aide to the governor or the general, the colonel could act as aide to the lieutenant general, the lieutenant colonel could act as aide to the brigadier, and a major could serve as aide in the brigadier's or colonel's battalion.

Under the battalion officers served officers known as 'company officers' (*shaoguan*). A captain of naval forces (*shuishi qianzong*) commanded a company (*shao*) or a group of vessels at a naval base. Lower officers in charge of smaller subunits included the first lieutenant (*shuishi bazong*), the second lieutenant (*shuishi waiwei qianzong*), the warrant officer of naval forces (*shuishi waiwei bazong*), as well as the junior warrant officer (*waiwei*), and the sergeant (*ewai waiwei*). As in the regular Green Standards, a first lieutenant generally commanded a platoon, while the sergeant commanded a squad.

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[117] Chung-yam Po, *Conceptualizing the Blue Frontier: The Great Qing and the Maritime World in the Long Eighteenth Century*. 2013. Ruprecht-Karls-Universität Heidelberg, PhD, pp.119–24.

[118] Some marines were also raised from Chinese-martial bannermen. Wade, 'Army of the Chinese Empire', pp.319–20, 372–80. When no other source is given, this section is primarily based on Siu, *Forts and Batteries*.

In Guangdong province (around Canton), the naval forces were generally commanded by a lieutenant general of naval forces (*shuishi zongbing*). He commanded a headquarters brigade (*zhenbiao*) of three headquarters battalions (*zhenbiao ying*) and two left and right regiments (*xie*), each of two battalions (*ying*). His total forces comprised more than 6,000 men. In the early reign of the Kangxi emperor, the lieutenant general was replaced by a general of naval forces (*shuishi tidu*) in Guangdong, but this post was later abolished and was only resurrected in 1810. Every summer and winter, the general would personally lead the fleet on an inspection tour of the defensive bases. With the post of general, the forces were increased to a headquarters brigade (*tibiao*) of five headquarters battalions – namely, the front, rear, left, right, and middle – and increased to an additional five brigades (*zhen*) as follows:

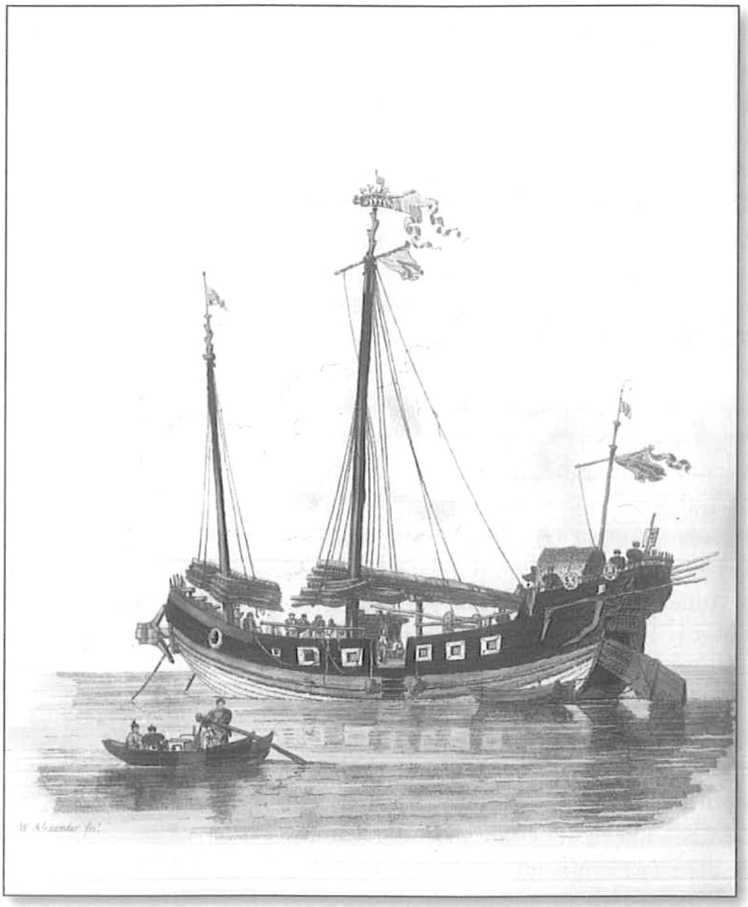
- Nan'ao Brigade, comprising two battalions, the left and right. The left battalion was, in fact, subordinated to the general of naval forces of Fujian province, an area notorious for pirate activities. The right battalion was commanded by the general of naval forces of Guangdong. The division also included the Chenghai Regiment (of left and right battalions), the Haimen Battalion, and the Dahao Battalion.
- Jieshi Brigade, comprising three battalions, the left, right, and middle. The division also included the Pinghai Regiment.
- Beihai Brigade, comprising the Longmen Regiment, of two battalions, the left and right.
- Gaozhou Brigade, comprising five battalions, known respectively as Yangjiang, Dianbai, Wuchuan, Xiongzhou, and Dongshan.
- Qiongzhou Brigade, comprising two battalions, the left and right. The brigade also included the right battalion of the Yazhou Regiment and the Haikou Regiment (later reduced to a battalion).

The general of naval forces in Guangdong also commanded the Xiangshan Regiment, Shunde Regiment, Dapeng Regiment, and Chixi Regiment, with each regiment comprising two battalions, the left and right. He also controlled the Guanghai Battalion, the left and right battalions of the Xinhui Regiment, the Qianshan Battalion, the Jingyuan Right Battalion, and the Yongjing Battalion.

All brigade (*zhen*), regiment (*xie*), and battalion (*ying*) commanders had their own command headquarters. These were mostly independent forts with adjoining batteries. During the Kangxi emperor's reign, 41 batteries were built in Guangdong province, most of them in the northern coastal regions adjacent to Fujian province. During the Jiaqing emperor's reign (1796–1820), the number of batteries increased first to more than 120 and later to over 160 (after the Daoguang emperor's reign, 1821–1850, and because of the Opium Wars with Britain and France).

Qing coastal forts were often impressive structures. Each fort consisted of several batteries, observation posts, barracks, gunpowder magazines, munitions stores, and parade grounds. Most forts were walled and moated, with ramparts up to five metres high and two metres thick, with battlements on top. Gun emplacements, rectangular or sometimes trapezium-shaped or circular elevated platforms, built of boulders cemented together, were at first built on hilltops with broad fields of vision. As naval artillery became more effective from the end of the eighteenth century, gun emplacements were instead built with thicker walls and on less exposed locations. Each battery had its dedicated command post, typically a keep inside an irregularly shaped, walled structure with bunkers inside the walls. The fortified barracks were commonly circular or protected by ramparts on the hillside behind the batteries. There were also beacon towers and lookouts along the coast. These transmitted messages by means of fire or smoke, differently coloured flags, and fireworks. Their main purpose was to signal the direction of the enemy.

Warship. (William Alexander, 1793)



As for ships, the naval forces of Guangdong counted a large number of different types of war junks. During the Jiaqing emperor's reign, the command included 167 coastal vessels and 329 river vessels of many different sizes and classes.[119]

The Green Standards, as noted, also included riverine forces. The Yangtze Riverine Force policed the Yangtze River from Yizhang to Wusong, as well as the numerous lakes close to the river's outlet into the sea. This force nominally consisted of 350 officers and 30,000 men, with about 1,500 boats of various sizes, with crews of from nine to 20 men. Its main task was to combat brigands and smugglers, which, at times, could lead to fierce fighting.[120]

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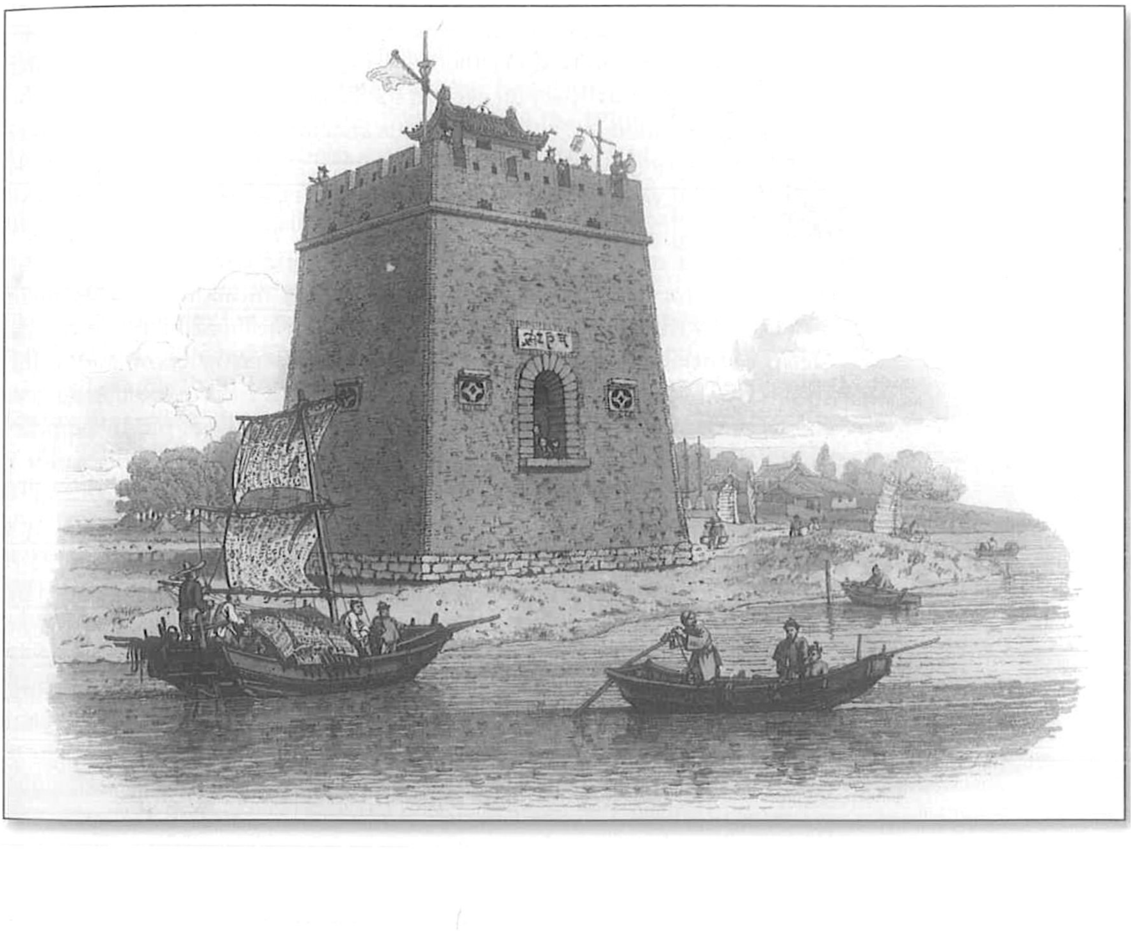
[119] The coastal vessels are listed as 18 *zeng* junks, 63 *ju* junks, three *shao* junks, 30 *miting* junks, 17 *pengzai* junks, 35 *tuofeng* junks, and one *wupi* junk. The river vessels are listed as 10 *kuaishao* junks, 16 *kuai* junks, 44 *jiang* junks, 12 *kuaijiang* junks, 178 *lujiang* junks, four *lu* junks, one *zhan* junk, 48 *jitiao* junks, four *gucao* junks, three *zhongcao* junks, and nine *kuaima* junks. For a similar but somewhat different list, see Wade, 'Army of the Chinese Empire', p.379.

The Yellow River Guards organisation was also counted among the Green Standards. This force consisted of detachments posted along the Yellow River to protect and maintain its embankments, which often had to be repaired during floods. The total number of men in the Yellow River Guards at the end of the period was reported as being 4,100.[121]

Finally, the Grain Transport Troops (*caobiao*) protected and conducted the transportation of taxes contributed in grain through the Grand Canal. This force consisted of 3,000 men who guarded the large fleets of barges employed for grain transports.[122] The actual transportation was handled by a vast organisation, in the first half of the nineteenth century consisting of over 65,000 men and more than 6,300 barges organised into 123 fleets.[123]

Coastal fort. (William Alexander, 1793)



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[120] Cavendish, 'Armed Strength', p.712.

[121] Cavendish, 'Armed Strength', pp.711, 716. On riverine forces, see also Wade, 'Army of the Chinese Empire', pp.367–69.

[122] Cavendish, 'Armed Strength', p.711.

[123] Wade, 'Army of the Chinese Empire', pp.369–72.

Chinese Reserve, Militia, and Local Forces

Remnants of various earlier Chinese military organisations survived or were revived in the Qing period. So remained, for instance, the centuries-old *fubing* household militia system, which derived from the Toba Wei, Sui, and Tang dynasties. According to this system, active units of serving soldiers existed side by side with purely administrative counterparts that functioned as a reserve through which soldiers could be recruited when needed. Similar systems had existed ever since the Han empire, and, to some extent, even the banner forces relied on a variant of this principle.[124] This system was, in part, taken over by the Green Standards, the troops of which were spread thin throughout the empire, awaiting imperial mobilisation. From about the same time (the Tang period) remained the *tuntian* system of military agricultural colonies (*bingtun*). Up to four-fifths of the colonists grew food to support the remainder, who were responsible for guard duty and occasional active service. Although the idea was originally conceived to create self-supported military units along the borders and in minority areas, similar colonies were eventually set up even in the central regions. Nonetheless, the Qing administration put little trust in this system and only used these forces for military purposes at the borders and in minority areas. The men of these garrisons, who came from Green Standards units, were relieved every five years.[125]

The *baojia* mutual surveillance system, intermittently used since the eleventh century and reintroduced by the Qing, in addition to its main purpose of dividing the population into mutual-responsibility units as a means of social control, provided local militias under the command of the local, civil magistrate. Their main duty in war was to provide messengers and to run errands. Militiamen were occasionally also sent out to suppress bandits. The militiamen received, at best, limited military training in their spare time. They were supposed to provide their own uniforms and were armed with whatever weapons could be provided, at best, no different from what was used by the regular army but, at worst, only cudgels.[126]

Each militia was subdivided into lesser territorial units, distinguished by the colour of their caps. Blue, red, white, black, and dull brownish yellow caps were used. Clear yellow, the imperial colour, was avoided. The use of colours to distinguish military units followed the pattern of the regular army, in which the system was most clearly shown in the use of unit flags (more on which below). Few militia units comprised more than 200–500 men. Most militias were organised into companies of 100, further divided into subunits of 25 and five, respectively.[127]

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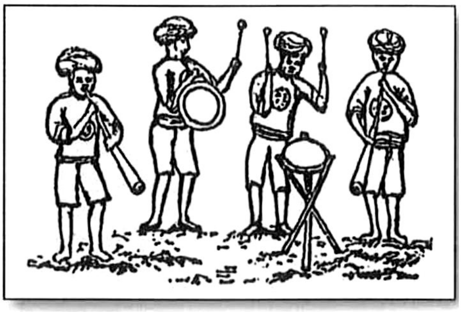
[124] See, for example, Philip A. Kuhn, *Rebellion and Its Enemies in Late Imperial China: Militarization and Social Structure, 1796-1864* (Cambridge, MA: Harvard University Press, 1970), p.19.

[125] Wade, 'Army of the Chinese Empire', pp.322, 382–86, 389; Ooi, 'Den militära strukturen', p.57; Perdue, *China Marches West*, pp.341, 345. On the Ming use of the *tuntian* system, see Wakeman, *Great Enterprise*, vols 1–2, pp.23–30. To some extent from the turn of the nineteenth century, but, generally speaking, only from the Taiping War, another variety of secondary local defence forces was already raised under the general name of '*tuanlian*'. On these forces, see Smith, 'Chinese Military Institutions', pp.146–50.

[126] On the *baojia* militia system, see Huang Liu-Hung [Huang Liuhong], *A Complete Book Concerning Happiness and Benevolence: Fu-hui ch'üan-shu, A Manual for Local Magistrates in Seventeenth-Century China*, Translated and edited by Djang Chu (Tucson: University of Arizona Press, 1984), pp.465–81. Although it is often claimed that the *baojia* system was reintroduced in 1644, this measure was only carried out later. Wakeman, *Great Enterprise*, vols 1–2, p.708 n.68.

A militia unit on duty carried various coloured flags and pennants. Its pace of advance, when marching, was supposed to be regulated by the beating of the drum and the sound of the horn, whistle, tartar pipe, and gong, just as in the regular army. Signal cannon were used to sound the alarm. This was likely also the main use of the militia's smaller guns whenever guns were available.[128]

In many, perhaps most, districts, the militias were neglected, untrained, and perhaps not even armed. The militia never formed an important part of the military forces in times of external war.



Chinese military band. (Jones Lamprey, 1867)

By the end of the eighteenth century, the faltering state army began to rely on the support of purely local village militia forces organised by the local gentry. Such men were often mercenaries, although technically volunteers and known as 'village braves' or only 'braves' (*xiangyong* or *yong*), and could only seldom (for instance, after the White Lotus revolt of 1796 had been crushed) be incorporated into the Green Standards. These units became increasingly important in the first half of the nineteenth century, as local gentry had to rely on whatever forces they could raise instead of the, by then, often demoralised banner and Green Standards organisation. Even then, most *yong* units comprised only a few hundred men, although some major ones counted more than 1,000.[129] Braves received double the pay of regular soldiers when enlisted for combat duty.[130] Late in the period, the lowest unit of their organisation, when there actually was a definite organisation, was, in similarity to the Green Standards, the squad or tent, consisting of two non-commissioned officers, 10 soldiers, and three coolies. Ten squads formed a company, and five to six companies made a battalion (*ying*). Each company had an additional 40 coolies attached for carrying ammunition and stores. Such a battalion often consisted of only 12 officers, 500–600 soldiers, and some 200 coolies, although there were huge variations between different units. They were, in the words of the British military attaché, Major A. Cavendish, 'generally composed of the scum of the nation attracted by promises of pay, they are miserably clothed, armed, and disciplined, irregularly paid, and, as a rule, disbanded at the first opportunity'.[131]

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[127] Huang, *Complete Book*, p.476.

[128] Huang, *Complete Book*, p.481.

[129] See, for example, Powell, *Rise of Chinese Military Power*, pp.22–27. See also Elizabeth J. Perry, *Rebels and Revolutionaries in North China, 1845-1945* (Stanford, CA: Stanford University Press, 1980), pp.84–88.

[130] See, for example, J. D. Ball, *Things Chinese; or, Notes Connected with China* (5th edition, London: John Murray, 1926), p.43.

[131] Cavendish, 'Armed Strength', p.713.

Mongol Reserve, Militia, and Local Forces

The Qing also employed Mongol militias. They were extensively used in the latter days of the Qing empire. These militias were not well organised. With the exception of tribal Mongol horse archers, who almost always served in the main Qing armies, such forces were primarily used to protect the frontier and postal routes by manning and patrolling key border checkpoints and maintaining the postal system. By the end of the period, Cavendish, the military attaché already referred to, concluded that the total manpower of the Mongol militias would have been approximately 30,000 (Qing sources from 1812 suggest higher total numbers).[132] Within the Mongol militias, each man brought his own horse, arms, and accoutrements.[133]

Tribal Mongol cavalrymen were organised into distinct socio-military units known in Mongolian as '*khōšighun*' (or *khōshun*; 'banner'), each further subdivided into about 10 *sumun* (arrow), each of nominally 150 fighting men. Several *sumun* formed a regiment (Mongolian and Manchu: *jalan*). These units should not, however, be confused with the regular Mongol banners of the Eight Banners organisation. These were territorial rather than demographic units and primarily served to disrupt existing hierarchies and organisations among the Mongols so as to make them more easily controlled by the Qing.[134] In time of war, one out of three fighting men might be called up for active service.[135]

To raise Mongol militias posed special problems, especially early in the period, as the Mongols remained nomads. On the steppe, the preparation of a campaign demanded careful planning and coordination. Not only was it necessary to know, and let know, how many men to call up, but it was also imperative to make arrangements for meeting places and times, the steppe being too vast to allow for mistakes. In 1629, Hung Taiji established regulations on how to accomplish this. It is quite possible that his regulations merely reiterated what, for centuries, had been standing operational procedures among the Mongols. The main provisions can be summarised as follows:

> 1. When going on an expedition against other steppe nomads, all Mongol nobles of an age under 73 years and over 13 must join.
> 2. Those who fail to join must forfeit 100 horses and 10 camels.
> 3. Those who fail to arrive at the appointed meeting place within three days from the established day must forfeit 10 horses.
> 4. When going on an expedition against China, then each [Mongol] banner must provide one khan and two princes leading 100 good soldiers.

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[132] Cavendish, 'Armed Strength', p.715; Wade, 'Army of the Chinese Empire', pp.323, 336–40.

[133] W. H. Cromie, 'The Military Forces of China', *Colburn's United Service Magazine* (1883), p.302. Cromie's paper, fundamentally a translation into English of Cerroti's article on the same subject in the *Rivista militare italiana*, pays particular attention to the numerical strength of the various military units.

[134] See, for example, Crossley, *Manchus*, p.100, and *Translucent Mirror*, p.315.

[135] Wade, 'Army of the Chinese Empire', pp.337–38.

5. Those who fail to join must forfeit 1,000 horses and 100 camels.
6. Those who fail to arrive at the appointed meeting place within three days from the established day must forfeit 10 horses.
7. Anybody who attacks the enemy before the army has gathered at the appointed time and place must forfeit 100 horses and 10 camels.
8. For purposes of calculating travel times, each group will have 15 days to cover a 10-day distance, and 20 days to cover a 15-day distance.[136]

Based on these regulations, the three golden rules for nomad warfare were (1) turn up on time or you will be fined, (2) do not alert the enemy by commencing hostilities before the main army has arrived, and (3) expect the unexpected when calculating travel time.

Mongol militia units were generally small. This was particularly true of the allied Mongol forces in the early years of the period. In 1630, two Mongol units are mentioned as having each consisted of 300 men. Although described as scouts and on reconnaissance missions, they clearly also had orders to raid enemy camps and even the flanks of the enemy army.[137] In 1628, in intra-Mongol tribal warfare, a Mongol unit of 800 men is mentioned, and, somewhat later in the same year, a major Mongol contingent of 2,000 men.[138] In the period 1632–1634, during a war in which the Manchus and their Mongol allies fought the Chakhar Mongols, a reconnaissance force of 200 Mongol scouts is mentioned, as well as a major Mongol army of 6,000 men.[139]

Tibetan Reserve, Militia, and Local Forces

When the Qing army in 1720 marched into Tibet and established a garrison there to expel the Oirat Mongols who, a few years previously, had assumed control over the country, they also made Tibet a protectorate and took over the obsolete Tibetan militia system. Strictly speaking, the units of the Tibetan army consisted of local military forces and not militia. In reality, however, the Manchus regarded them as a reserve or militia organisation and often employed them in a manner that seemed more consistent with that of a militia.

Tibet was, since at least the eighth century, known for its heavily armoured cavalry mounted on barded horses, of the type that used to be common throughout Inner Asia.[140] Tibet had no standing military, and the key fighting component of the army consisted of noble cavalrymen. However, the introduction of firearms into Tibet in the early decades of the seventeenth century made the armoured cavalryman obsolete. Firearms were introduced from the countries to the west and south and in particular from Bhutan. The era of the heavily armoured cavalryman accordingly ended in Tibet, as it did elsewhere for similar reasons, in the mid-seventeenth century.

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[136] Di Cosmo and Bao, *Manchu-Mongol Relations*, pp.66–67. The translation is based on the one provided by Di Cosmo and Bao.

[137] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.116.

[138] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.149.

[139] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.169.

[140] Christopher I. Beckwith, *The Tibetan Empire in Central Asia: A History of the Struggle for Great Power among Tibetans, Turks, Arabs, and Chinese during the Early Middle Ages* (Princeton, NJ: Princeton University Press, 1987), p.110 n.7.

The Tibetan military then underwent a transitional phase that began in the mid- to late seventeenth century. The transition took place simultaneously with the formation of a Lhasa state under the Fifth Dalai Lama, Ngawang Lobsang Gyatso (Ngag dbang blo bzang rgya mtsho; r. 1642–1682).[141] Established in 1642, the new polity three years later commenced the construction of the Potala Palace. An armoury called 'Dorjeling' (Rdo rje gling) was established at its base in 1667.[142] The armoury seems to have functioned as the base for a small contingent of guards and possibly supplied guard posts at one or more important markets. Yet there was still no standing army. Noble landowners would raise and arm men as needed, as well as serve in person as armoured cavalry. While horse armour fell out of use, the noble cavalrymen still wore personal armour, although of the lighter chainmail of the Indo-Persian style that they had encountered in Bhutan rather than the old lamellar style that derived from Inner Asia.[143] Eventually, it became common for noble landowners to not serve in person but to instead provide one or more soldiers and supply each man with a horse, arms, and accoutrements.[144]

From 1720 onwards, the Qing, to some extent, employed Tibetan local forces of this kind. Tibetans employed by the Qing outside Tibet more commonly served as a constabulary than regular army units. Over time, most acquired the characteristics of militias. The deployment of Tibetan militias grew increasingly common late in the period, and such militias were extensively used in the latter days of the Qing empire. In similarity to the Mongol militias, the Tibetans were primarily employed to protect the frontier and postal routes by manning and patrolling key border crossing points and maintaining the postal system. By the end of the Qing empire, the aforementioned military attaché Cavendish concluded that the Tibetan military could field up to 3,000 men.[145]

In the mid-eighteenth century, the Qing introduced plans, probably never realised, for a Tibetan standing army that altogether would have consisted of 10,000 cavalry and 15,000 infantry.[146]

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[141] The first of its kind, the Lhasa government is also known as the 'Ganden Phodrang', from the Fifth Dalai Lama's residence at the Ganden Palace (Dga' ldan pho brang) at Drepung. Not only was the Fifth Dalai Lama a charismatic leader, but he also developed a system of esoteric tantric rituals for 'war magic', which he regarded as instrumental in defeating enemies and in uniting Tibetans and Mongols under his religio-political authority. He was largely successful in the latter. Solomon G. FitzHerbert, 'Rituals as War Propaganda in the Establishment of the Tibetan Ganden Phodrang State in the Mid-17th Century', *Cahiers d'Extrême-Asie*, 27 (2018), pp.49–119.

[142] Federica Venturi, 'The Dorjéling Armoury in the Potala According to the Fifth Dalai Lama's Gsung 'Bum', *Annali di Ca' Foscari, Serie orientale*, 57, Supplemento (2021), pp.933–79.

[143] Michael Fredholm von Essen, 'The Impact of Manchu Institutions on Tibetan Military Reform', *6th Nordic Tibet Conference Proceedings, 5–6 May 2007, Stockholm*, Stockholm University, 2007.

[144] Cromie, 'Military Forces', p.302.

[145] Cavendish, 'Armed Strength', p.715; Wade, 'Army of the Chinese Empire', pp.323, 336–40.

[146] Petech, *China and Tibet*, pp.230–31.

As far as is known, a real Tibetan standing army was only formed in the winter of 1792/1793. The context was that of the Gurkha invasion of Tibet in 1791 and the decisive defeat inflicted upon the Gurkhas by a combined Qing and Tibetan army in 1792. This reform was pushed through by the then Manchu commander in Tibet. While earlier attempts, no doubt even then inspired by the Manchu military system, had been made to form a standing army, these had been ineffective and largely without results. So, when the Qing had pushed the Gurkhas back into Nepal, they perceived the need to establish a functioning, standing military force in Tibet as well. The new, native Tibetan standing army was based on the Qing army and meant to be able to guard the southern borders of Tibet on its own against both native rulers and the British army in India. Tibet would thus again serve in the role of a buffer state, a role for Tibet for which Ming Chinese leaders such as Yang Yiqing (1454–1530) had argued as early as in 1505.[147]

Since it was the Qing military under the Manchu General Fukang'an (d. 1796) that had defeated the Gurkha invaders and Tibet remained a Qing protectorate, it was not surprising that the Qing army was regarded as a pattern for the new Tibetan army; it had a, by then, well-deserved reputation for efficiency and had proven its worth against first Mongol, then Gurkha invaders.

A new Tibetan military force was thus created in the winter of 1792/1993.[148] In 1793, Fukang'an drew up what would become the Imperial Ordinance of 29 Articles for the More Effective Governing of Tibet, which, among other reforms, established a standing force of Tibetan soldiers. The new Tibetan army was in operation at the latest by 1794, when the Qing military bestowed rewards on, among others, men who were described as Tibetan soldiers stationed on the border who had participated in military manouevres, an activity that the old levy would not have been involved in. Fukang'an fixed the number of Tibetan troops on active service at 3,000 – not a great number but equal to that of most Qing expeditionary forces. To this number, it seems, should be added the officers, who (which will be shown below) were at least 162 in number.[149] The new, native Tibetan standing army was fully based on the Qing army. Tibetan regular soldiers were trained in the Qing manner, based on the training system of the Chinese Green Standards. Being known in Tibetan as 'Chinese-trained' (*rgya sbyong*; '*rgya*' being the colloquial name for 'Chinese' in Tibet),[150] the new force consisted of two main components: regular soldiers on active service and the reserve or home guard (*yul dmag*, 'regional army'), which consisted of former regulars who remained at any moment subject to recall into active service. Those on active service served for three years in exchange for food and what may have been a monthly salary in silver (whether this was paid regularly or not remains unclear; the men also received other monetary rewards from time to time).[151] According to a British intelligence report, the rest were on half-pay, but this might be a misunderstanding based on conditions in the British army at the time. The regular army was thus said to consist of 6,000 men, half of whom were under arms and the other half of whom remained at home.[152] All soldiers were recruited locally, and, after recruitment, they became exempted from corvée duty and taxation.[153]

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[147] Roger Greatrex, 'Smuggling or Trade? Commerce on the Eastern Tibet Border (1400-1800)', *6th Nordic Tibet Conference*, 5–6 May 2007, Stockholm, Conference Presentation.

[148] To be specific, in a memorial to the throne dated the eleventh day of the Twelfth Month of the fifty-seventh year of the Qianlong reign period, which corresponds to early 1793.

[149] Chen Xiaoqiang, *The Qing Court's Troop Deployment in Tibet and Its Expenditure* (Beijing: China Tibetology Publishing House, 2005).

[150] Das, *Journey to Lhasa*, p.52.

In addition to the standing Tibetan army, there was also a standing force of Dam Mongol soldiers in northern Tibet. They received the same payment, in food, as the Tibetan soldiers, but they also received an additional food subsidy of 0.9 taels of silver per year (the tael was a unit of weight for silver; the treasury tael being the equivalent of 37.3g). The Dam Mongol soldiers remained under the direct control of the Qing Amban (the Qing Resident in Lhasa), perhaps even after 1821 (see below). They, too, as other Tibetan and Qing troops, were eligible to receive rewards in times of wars, inspections, and manoeuvres.[154]

Organisation and Pay

The lowest unit in the Tibetan army was the squad, commanded by a warrant officer called '*chupon*' (*bcu dpon*, literally 'leader of 10').[155] A number of squads formed a platoon consisting of 25 men and commanded by a *dingpon* (*lding dpon*, literally 'leader of 50', or possibly*'bring dpon*, 'middle leader', a title perhaps best translated as 'lieutenant').[156] Five platoons constituted a company of 125 men, under the command of a *gyapon* (*brgya dpon*, 'leader of a hundred', perhaps best translated as 'captain'). Two companies formed a battalion, under the command of a *rupon* (*ru dpon*, 'line leader' or 'major'). Two battalions formed a brigade of 500 men under the leadership of a *dahpon* (*mda' dpon*, 'arrow leader' or 'lieutenant colonel'; whether this title was inspired by the Manchu title of the same meaning or was of older origin remains unclear since, at present, it only suggests the act of shooting a weapon).[157]

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[151] Chen, *Qing Court's Troop Deployment*.

[152] Das, *Journey to Lhasa*, pp.40, 180. A recall into active service was, in December 1881, witnessed by the Indian intelligence agent Sarat Chandra Das, who later described how Delah Tondub, the head of the reserve or home guard (*yul dmag*) received an order from Khampa Dzong that he and his force must be ready to proceed at once to the Lachan boundary, fully equipped with matchlocks, lances, swords, slings, and other necessary equipment.

[153] Chen, *Qing Court's Troop Deployment*.

[154] Chen, *Qing Court's Troop Deployment*; Wade, 'Army of the Chinese Empire', p.336.

[155] Commonly used transliteration systems do not fully represent the pronunciation of vernacular Tibetan, hence the differences in spelling.

[156] Tim Coates (ed.), *The British Invasion of Tibet: Colonel Younghusband, 1904* (London: The Stationary Office, 1999), pp.65, 159. In the province of Tsang, a platoon leader was reportedly known as a '*ske ngo*'.

[157] Chen, *Qing Court's Troop Deployment*, citing the collection of Qing laws named '*Daqing huidian*' ('Collected Statutes and Precedents of the Great Qing'; in the section dealing with the Lifanyuan, the Court of Colonial Affairs, which administered the empire's Inner Asian territories), from the

Tibetan regular soldiers trained in the Qing manner wore the Manchu queue and, at least up to the mid-nineteenth century, had Chinese-style uniforms. In the first half of the nineteenth century, these might include blue jackets, reportedly with the usual white, circular badge on breast and back, but, in this case, with the characters '*fanbing*' ('frontier-subject soldier'; that is, a foreign soldier who professed allegiance to the Qing empire and protected its border).[158] By the late nineteenth century, it was reported that Tibetan soldiers were usually no longer wearing Chinese-style uniforms, although some wore black jackets.[159] By then, Tibetan soldiers nonetheless presented a fairly uniform sight since all wore normal Tibetan dress. The officers from the rank of *gyapon* and upwards, when dressed as Qing officers, wore hat buttons that would seem to indicate that they were included in the system of mandarin grades (more on which below). A *gyapon* would then be the equivalent to the sixth grade, a *rupon*, fifth grade, and a *dahpon*, fourth grade. The ranks of *dingpon* and *chupon* wore only brass hat buttons, which would seem to indicate that they carried no official mandarin grade.[160] Officers, even low-ranking ones, were usually mounted on horseback.[161]

By some accounts, the Tibetan army at first consisted of about 3,300 Tibetan and 1,450 Qing soldiers. In similarity to the previous system, recruits (*dmag mi*, 'army men') appear to have been provided by local landholders who had been granted arable land with the obligation to provide and support a soldier. In 1846, the Tibetan and Qing units were separated from each other within the Tibet army. The Tibetan force remained unchanged until 1913, when it consisted of about 3,000 men, roughly 1,800 men from the province of Ü (*dbus*) and 1,200 from the province of Tsang (*gtsang*).[162]

Until 1821, the Tibetan units remained under the direct control of the Amban (Manchu: 'official'; in this context Resident), who had authority over Qing affairs in Tibet. However, the nominal head of the Tibetan army was a Tibetan general, or *magpon* (*dmag dpon*, 'army leader'). Qing regulations stipulated that, of the six *dahpon*, two would be stationed at Lhasa (capital of Ü), two at Shigatse (capital of Tsang), one at Gyantse, and one at Tingri near the Nepalese border. Of the 3,000 Tibetan troop, 1,000 were thus stationed in the Ü region, 1,000 in the Tsang region, 500 at Tingri, and 500 at Gyantse.[163]

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period 1875–1908 but based on earlier documents. That this organisation remained in force, at least on platoon level and higher, as late as in January 1882 is confirmed by Das, *Journey to Lhasa*, p.86.

[158] Wade, 'Army of the Chinese Empire', p.340.

[159] Das, *Journey to Lhasa*, p.180.

[160] Ian Heath, *Armies of the Nineteenth Century: Asia 1: Central Asia and the Himalayan Kingdoms* (Guernsey: Foundry Books, 1998), p.164.

[161] See, for example, Coates (ed.), *British Invasion*, p.184.

[162] Melvyn C. Goldstein, *A History of Modern Tibet, 1913–1951: The Demise of the Lamaist State* (Berkeley: University of California Press, 1989), p.66.

[163] Chen, *Qing Court's Troop Deployment*, citing the *Daqing huidian* (the section dealing with the Lifanyuan), from the period 1875–1908 but presumably based on earlier documents. That this deployment remained in force as late as in January 1882 is confirmed by Das, *Journey to Lhasa*, pp.178, 180. The full text of the *Daqing huidian*, as cited by Chen, describes the Tibetan army: 'There are 3,000 Tibetan troops. 1,000 will be stationed in the Ü region, 1,000 in the Tsang region, 500 at Tingri and 500 at Gyantse. 50 percent of them will use matchlock muskets, 30 percent use bows and arrows, and the remaining 20 percent use swords. Soldiers shall have their

Late in the Qing period, it appears that there were also six independent battalions, each commanded by a *rupon*. Of these, three were deployed in Ü and three in Tsang.[164]

Since the Tibetan units formed a standing force, their main duty was to garrison and to practice military manoeuvres. They were, as noted, expected to train as per the standards of the Qing Green Standards troops, and the Amban was supposed to make an inspection of the Tibetan soldiers each year to ascertain whether their level of training fulfilled requirements. The Tibetan officer who was responsible for training was the *dahpon*. He did not receive a salary but was given an estate by the Dalai Lama to support him financially.[165]

Below the rank of *dahpon*, the Tibetan officers received monetary salaries. Each *rupon* received 36 taels of silver every year. A *gyapon* received 20 taels of silver per year, while a *dingpon* had a salary of 14.8 taels of silver annually. Funds for pay were the responsibility of the Kashag organ best known for being in charge of the accounts of the month-long Great Prayer Festival, or Monlam Chenmo (*smon lam chen mo*), held annually in Lhasa during the first month of the lunar year. In fact, most of the revenue of this organ was used on religious activities and on behalf of the Dalai and Panchen Lamas. Twice a year, the Tibetan government transferred the required funds to the Amban, who, as noted, until 1821, was the one who controlled the Tibetan forces. In addition to the funds from the Tibetan government, which accounted for only a small share of Tibet's military budget, further funds came from the proceeds of a number of estates that had been confiscated in times of revolt and in the form of limited payments from the Qing central government. The Tibetan government was also, presumably due to its chief role in funding, responsible for the manufacture of weapons. The soldiers received a food allowance but not, it seems, regular monetary wages. Although the Qing central government was not responsible for the daily expenses of the Tibetan units, the Qing often rewarded the men after wars and during inspection tours, manoeuvres, and so on to encourage the soldiers. Such rewards were also handed out to Qing troops elsewhere, and, since they could form a very substantial part of a soldier's income, the Qing knew their value for morale. In 1789, that is, already before the creation of a standing Tibetan army, it was decided that all Tibetan officers and soldiers, including the Dam Mongols, would be given rewards once a year. The rewards could consist of brocade, cloth, tobacco, tea, and silver plates in addition to money.[166]

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hair shaved. Every 25 soldiers shall be under a *dingpon*, every five *dingpon* skall be under one *gyapon*, every two *gyapon* shall be under one *rupon*, and every two *rupon* under one *dahpon*'.

[164] Das, *Journey to Lhasa*, pp.178, 180.

[165] Chen, *Qing Court's Troop Deployment*.

[166] Chen, *Qing Court's Troop Deployment*.

Regular Qing Units in Tibet

There were of course also regular Qing troops in Tibet. Qing soldiers on such duty spent three years in rotation in Tibet.[167] When, in January 1882, the Indian intelligence agent Sarat Chandra Das (1849–1917) had one of his Tibetan agents make a *dingpon* in Gyantse talkative through plying him with alcoholic drinks, the Tibetan officer mentioned that, in addition to the 500 Tibetan soldiers stationed at Gyantse under the *dahpon* Tedingpa, there were 50 Chinese soldiers under a Chinese officer.[168] Das also learnt that the troops at Gyantse and Shigatse were under the control of the Qing paymaster at Shigatse.[169] By 1901, at least, there were four paymaster's offices – and thus Qing military headquarters – for soldiers in Tibet: at Lhasa (for the Ü region), Shigatse (for the Tsang region), Lhari, and Jingxi. The Tibetan army was regarded by the Qing as being incorporated into the Qing military establishment. Thus, the Tibetan soldiers in the Ü region were technically under the control of the Green Standards colonel of the Qing garrison at Lhasa (which makes sense since a *dahpon* was of fourth mandarin grade, that is, one level below the colonel's third grade). Likewise, the Tibetan troops in the Tsang region and at Tingri and Gyantse were under the nominal authority of a Green Standards lieutenant colonel (who, being of fourth mandarin grade, technically may have been regarded as of the same rank as the Tibetans holding the rank of *dahpon*).[170]

Levies and Noble Cavalry

In addition to the strictly military ranks, there were also a large number of officials best described as 'district magistrates', each holding the title of *dzongpon* (*rdzong dpon*; literally 'castle leader'). They were entrusted with both civil and military powers in their domains. In military matters, they were subordinated to the *dahpon*. They had to show their proficiency in military matters at the annual inspection of soldiers made by the Amban and the *dahpon*. The magistrates received 'blue or crystal buttons' to be worn on their official hats, which indicate that they had been awarded from sixth to third mandarin grade.[171]

The *dzongpon* had the authority, at least in theory and whether on behalf of the Qing or not, to raise the traditional Tibetan levy, which, up to 1793, constituted the bulk of any Tibetan army. Each family and each landholder were, in theory, required to provide an armed man with provisions for a month, as well as another member of the family to carry the fighting man's provisions. In the case of the landholders, the number of fighting men they needed to raise depended on the size of their land, and each was to be provided with a servant to carry the fighting man's provisions.[172] Nobles, officials, and leading men, in case of such calls for mobilisation, had to provide quotas of cavalry (*rta dmag*), presumably mounted archers wearing chainmail of the type that was introduced in the mid-seventeenth century. Levies were summoned for active service by the despatch through the villages of an arrow attached to a white cloth. Estimates from the nineteenth century indicate that Tibet, in theory, could muster about 60,000 men, including several thousand horsemen.[173] Such large Tibetan forces were never raised, however. By 1728, before the plans for the already-mentioned standing army of the mid-eighteenth century were conceived, one probably fairly typical, if large, Tibetan field army consisted of 3,000 cavalry and 9,000 infantry.[174]

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[167] Chen, *Qing Court's Troop Deployment*.

[168] The American diplomat William Woodville Rockhill (1854–1914), who eventually edited the reports of Das for publication and had considerable personal experience from the region, believed this Chinese officer to have been a Green Standards captain (*qianzong*). Das, *Journey to Lhasa*, p.86.

[169] Das, *Journey to Lhasa*, p.86.

[170] Chen, *Qing Court's Troop Deployment*.

[171] Das, *Journey to Lhasa*, p.176.

Tibetan Tactics

Tibetan soldiers were not shy of charging into the enemy. A Tibetan charge was accompanied by a 'wild war shout' as the Tibetan swordsmen rushed out at their enemies. This was witnessed, on several occasions, during the British invasion of increasingly independent Tibet in 1903–1904 (the Younghusband Mission). Dr Laurence Austine Waddell described it as 'the shrill barking yell of "Ki-hu-hu-u-u! Ki-hu-hu-u-u!" which burst forth from several hundred hoarse Tibetan throats'. Another British officer, Lieutenant Colonel Herbert Brander, compared it to the cry of the Indian jackal: 'hya-hya-hya, uttered in a rising falsetto voice'.[175]

Tibetan soldiers were also skilled in the very rapid construction of field fortifications of stone in the form of defensive walls, often from one end of a valley to the next, complete with embrasures, loopholes, and even simple turrets. The engineering skills of the Tibetan military, at first despised by their British adversaries, soon became evident during the 1903–1904 war.[176]

Tibet had a large number of fortresses, each known as a '*dzong*' (*rdzong*). These were also, for obvious reasons, often used in times of war.[177]

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[172] One soldier was to be supplied for every *rkang* of land that he owned. The *rkang* was a standard Tibetan unit of land measurement, in this case presumably the *dmag rkang* or 'army' *rkang*, that is, land originally granted with the obligation that the landholder was to provide and support a soldier. Das, *Journey to Lhasa*, p.180; Goldstein, *History*, p.66 n.3.

[173] Heath, *Armies of the Nineteenth Century: Asia 1*, p.154.

[174] Petech, *China and Tibet*, p.128.

[175] Charles Allen, *Duel in the Snows: The True Story of the Younghusband Mission to Lhasa* (London: John Murray, 2004), pp.116, 161, 195.

[176] See, for eaxmple, Coates (ed.), *British Invasion*, p.159; Allen, *Duel in the Snows*, pp.167–68.

[177] On this subject, see Ingun Bruskeland Amundsen, 'On Bhutanese and Tibetan Dzongs', *Journal of Bhutan Studies*, 5 (Winter 2001), pp.8–41.

Qing Legacy of the Tibetan Army

Since the Tibetan standing army was formed and trained by Qing officers, it was hardly surprising that it came to assume many characteristics of the regular Qing army. First, the Tibetan soldiers were being trained in the same way as the Chinese soldiers of the Qing army, the Green Standards. In addition to similarities in organisation, which may or may not have been incidental, this meant that, unlike in the past, the new Tibetan army was predominantly an infantry army, armed and equipped in the same manner as other Green Standards units. Gone was the former emphasis on irregular and very likely undisciplined noble cavalry; gone was also obsolete body armour. Second, the Qing, as will be shown, brought a new emphasis on artillery, both of the light variety in the form of jingals and of the heavy variety in the form of cannon. In 1904, these weapons, despite their age and obsoleteness in the face of modern weaponry, on occasion even served as a deterrent to the British soldiers of the Younghusband expedition.[178] Third, the Qing attempted to make the Tibetan army a uniformed force of men, although, in this, they had only limited and temporary success. Fourth, the Qing made repeated attempts to ensure that the standing force of men was paid as soldiers, although it remains unclear whether the men in fact received regular wages from the Qing administration or only the annual rewards, which still might be a substantial form of remuneration. Fifth, the Qing set up or at least improved upon a set of production facilities of weapons and gunpowder in Tibet, where earlier few such had existed.

Korean Tributary Army

Korea was a sovereign kingdom ruled by the Yi dynasty. Yet Korea, officially the Great Joseon State, had emerged in conjunction with Ming China and remained dependent on China, whether Ming or Qing, in foreign affairs. Korea nonetheless had an independent military establishment that, unlike those of the Mongol nations, Tibet, and Sinkiang, remained autonomous of the Qing imperial army. The Korean military establishment was structured around five royal, ostensibly regional commands or divisions that were based in the capital, Seoul.[179]

Each division (*yang*) encompassed five brigades (*bu*), each of which consisted of four or five regiments (*sa*). Under the regiments were battalions (*yeo*), each usually made up of three companies (*gi*), which, in turn, were divided into platoons (*dae*) and squads (*o*). The squad was the smallest unit and consisted of five men. The core of the organisation consisted of regular soldiers supplied with arms and armour from the state. There was also a system in place to draft 'conscript soldiers' (*jeongbyeong*) when more men were needed.

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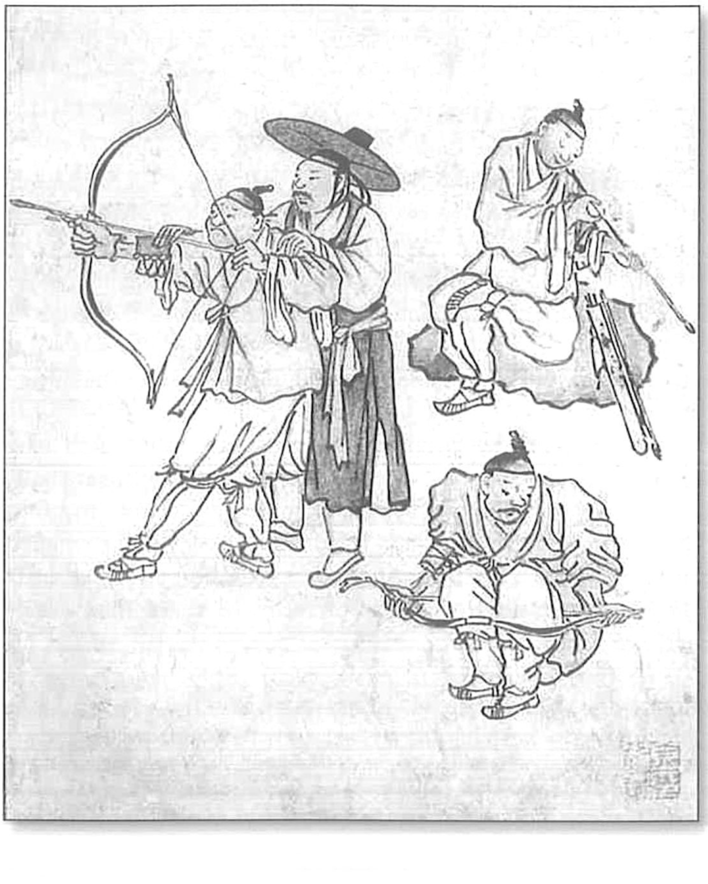
[178] See, for example, Allen, *Duel in the Snows*, pp.185–86.

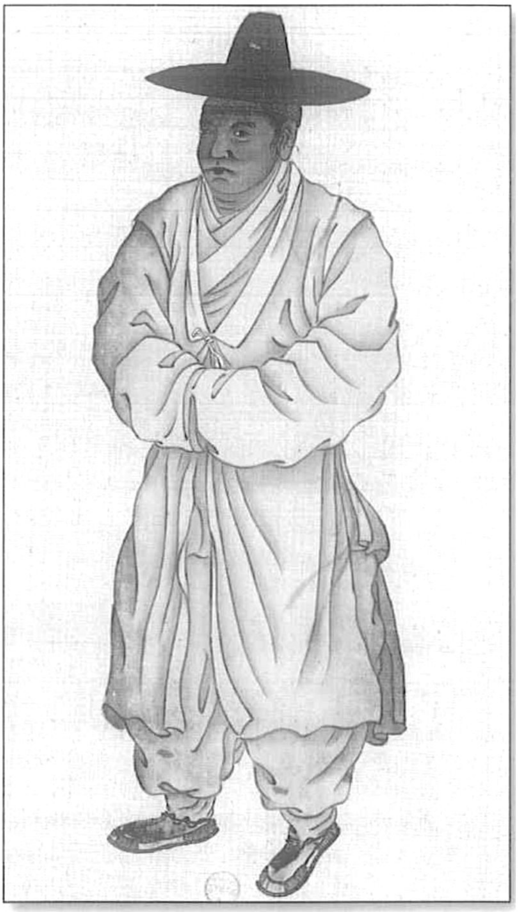
[179] Our focus lays on the Korean tributary contingents that served, or potentially were available for service, in Qing armies. Space does not permit a full description of the Joseon army, which followed its own trajectories of development and deserves a more comprehensive study elsewhere.

Possibly more important for defensive purposes were the provincial armies. Each province had its own army and navy command, which controlled the provincial garrisons (*jin*). The provincial 'garrison forces' (*jinsugun*) consisted of regular soldiers who defended the province's fortifications, peasant levies raised for labour units that provided various support functions, and sailors who manned the warships. The peasant levies served according to a rotation system in which they were supplied with cotton cloth and food provisions during their time of service by those peasants who remained on the land and returned to farm work when stood down.

Korean towns and cities were, in similarity to China, protected by walls. These fortified areas were called '*eupseong*'. Rural areas were frequently protected by mountain castles, called '*sanseong*', to which peasants were expected to flee in case of emergency. Peasants were levied to build and maintain mountain castles. However, the mountain castles were often located far from populated areas, and peasants had few incentives to either maintain them or seek refuge there. Moreover, both mountain castles and town walls were often poorly designed and constructed. Most had straight walls that did not enable the concentration of firepower on the enemy during an assault, and walls were often too low and weak to prevent a determined enemy from forcing them. It was only the major cities that had Chinese-style walls and gateways.



Yangban officer training conscripted archers. Note the officer's white civilian dress and characteristic semi-transparent wide-brimmed top hat. (Kim Hongdo, a.k.a. Danwon, *Hwal ssogi* ('Archery'), 1780)



Yangban officer in characteristic white daily dress. (*Huang Qing zhigong tu*, 1769)

There was little difference between civilian and military officers, both of whom derived from landed or unlanded aristocrats or gentry who often were highly educated in the Confucian classics. Known collectively as '*yangban*', they consisted of office holders, their families and descendants, and land-holding country gentry who claimed such descent and had the means to support the *yangban* lifestyle. The kingdom maintained a system of civil and military examinations, based on the Chinese model, for the appointment of men to office. As a result, many office holders were efficient administrators, and Korea employed a network of post stations and lines of beacon fires that were used to alert the capital in times of crisis.[180]

During the emergence of the Manchu empire, Korea suffered from domestic political unrest, so vacillated between pro-Ming and pro-Qing polices. Ultimately, the kingdom threw in its lot with Ming China. This turned out to be a mistake. We have seen that Hung Taiji, in 1636–1637, subjugated Korea, whose King Injo (1595–1649; r. 1623–1649) had to surrender to the Qing emperor in a public ceremony. He also had to send hostages to the Qing court, accept tributary payments to the Qing, and accept the Qing emperor as his suzerain. A Manchu Resident who had authority over Qing affairs in Korea moved into Seoul to safeguard the empire's interests.[181]

Yet the campaign had been comparatively short, and Korea survived as a tributary state with its own distinct culture and military. Hung Taiji had a particularly high regard for Korean infantry and especially the country's musketeers. He later wrote, 'The Koreans are incapable on horseback but do not transgress the principles of the military arts. They excel in infantry fighting, especially in musketeer tactics, and would be of great use when storming a fortress.'[182] The Qing empire could call up the Korean Tributary Army for service as needed. A contingent of Korean artillerymen and musketeers served under the Manchu Prince Jirgalang in 1641.[183] Korean musketeers were called up to serve the Manchus against Ming loyalists on eight occasions and twice more against Russian intruders in the Amur region: in 1654 and again in 1658 under Šarhūda, an officer of the Bordered Blue Banner.[184]

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[180] Ki-baik Lee, *A New History of Korea* (Seoul: Ilchokak, 1984), pp.178–80.

[181] On the Manchu conquest of Korea, see, for example, Lee, *New History of Korea*, pp.215–17.

[182] *Qing Taizong shilu*, *Qing shilu*, *j.*, pp.37, 494a, as cited and translated in Hyeok Hweon Kang, 'Big Heads and Buddhist Demons: The Korean Musketry Revolution and the Northern Expeditions of 1654 and 1658', *Journal of Chinese Military History*, 2 (2013), p.155.

[183] Wakeman, *Great Enterprise*, vols 1–2, p.212 n.158.

[184] Kang, 'Big Heads', pp.127–89.

Elderly yangban officer in semi-transparent hat, 1863. (Anon.)

Korean Musketry Revolution

Militarily, Korea was in a transition period. The Japanese invasions of 1592–1598 and the Manchu invasions of 1627 and 1636–1637 caused major changes in Korean arms and armament.

Composite bows had already been introduced by the Mongols, if not before, but, since they were difficult to manufacture and at times vulnerable to the humid climate of Korea, bows were also made of bamboo and other materials. Straight quivers for use by infantry archers remained in use, even though the Mongolian-style quiver and bow case were known and grew yet more common following the Manchu invasions.

Swords imported from Japan, or captured in battle with Japanese, made an impact on Korean styles, and Japanese methods of forging swords were introduced. Swords in Japanese style were soon also adopted in Qing China, although traditional styles ultimately prevailed.

While Korea had long used early cannon in the Chinese manner, the early seventeenth century saw a switch to modern artillery systems based on European types.

Korea also seems to have refocused its military establishment on cavalry at the expense of the traditional infantry. This development continued, at least in part inspired by Manchu practices, until the late eighteenth century.

Yet the greatest change that took place transitioned the Korean army from a force primarily armed with bows into one armed with muskets. Many were trained in volley fire.[185] Musketeers not only grew dominant numerically but also became central to the tactics of the Korean army. We will see that Korean musketeers became very proficient with the new weapons and tactics and, when called up, served the Qing well.

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[185] Kang, 'Big Heads', pp.127–89; Tonio Andrade, Hyeok Hweon Kang, and Kirsten Cooper, 'A Korean Military Revolution? Parallel Military Innovations in East Asia and Europe', *Journal of World History*, 25:1 (2014), pp.51–84.

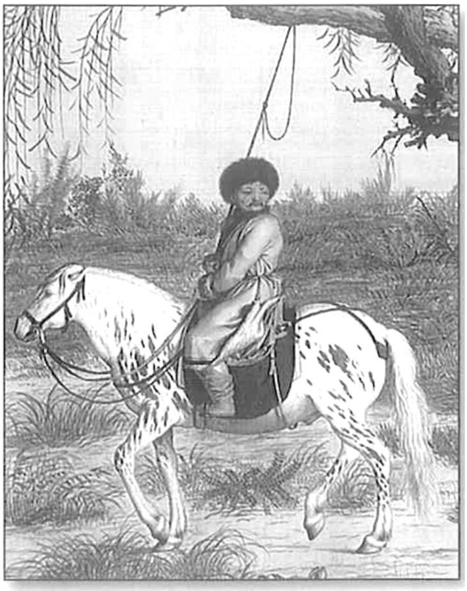
3

Uniforms

Enlisted Men's Uniforms

Even as early as in Nurgaci's time, his soldiers were strictly required to be uniform in dress and hairstyle. They were dressed in the traditional Jurchen plain leather boots, breeches, and coats, of materials determined by the season as well as the wearer's rank. We have an eyewitness to their dress in the Korean envoy Sin Jungil, who visited Nurgaci in 1595/1596. Among other details, he noted that Nurgaci's men spared a small patch of moustache on each side of the upper lip but plucked the rest.[1] They shaved the forehead and braided the hair back in a queue (*bianzi*), known in the West as a 'pigtail'.[2]

After the conquest of China, all male Manchus and Chinese, regardless of rank, had to adopt the distinctive Manchu queue. They also generally shaved, at least while below the age of about 40 or 45, although a narrow moustache was commonly retained. This hairstyle was also frequently used by Mongols and other auxiliary soldiers,



Manchu or Mongol in traditional dress. Note the lariat. (Giuseppe Castiglione, 1728)

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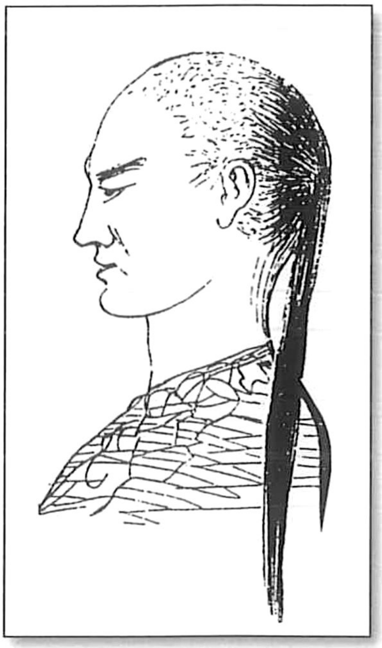
[1] Sin Chung-il, cited in Crossley, *Manchus*, pp.57–58.

[2] This chapter is, except when so noted, essentially a synthesis of information provided in Valery M. Garrett, *Traditional Chinese Clothing in Hong Kong and South China, 1840-1980* (Oxford: Oxford University Press, 1987), and *Chinese Clothing: An Illustrated Guide* (Hong Kong: Oxford University Press, 1994); A. C. Scott, *Chinese Costume in Transition* (Singapore: Donald Moore, 1958); Shen Congwen, *Zhongguo gudai fushi yanjiu (Ancient Chinese Costumes)* (Hong Kong: The Commercial Press, 1981); Mette Siggstedt, *Kinas dräktskick under sen kejsartid* (Stockholm: Östasiatiska museet, 1995); Molen and Uitzinger, *Forbidden City*; Verity Wilson, *Chinese Dress* (London: Victoria and Albert Museum, 1986); Heath, *Taiping Rebellion*; Victor Wong, 'The Emperor's New Clothes: Chinese Sacrificial and Court Dress', *Ancient Warrior*, 1 (Winter 1994/1995), pp.40–48; Zhou Xun et al., *Zhongguo lidai fushi* (Shanghai: Xuelin chubanshe, 1983); and Zhou Xun and Gao Chunming (eds), *Zhonguo fushi wuqiannian: 5,000 Years of Chinese Costumes* (Hong Kong: The Commercial Press, 1984).



The distinctive Manchu tonsure. (Augustus F. Lindley, 1866)

although it was not compulsory for Mongols, Tibetans, Uighurs, or the minorities in south-western China.[3] The depiction of the Manchu Brigadier Janggimboo, from a series of 50 portraits painted in 1760, shows the general as clean-shaven except for a narrow moustache.[4]

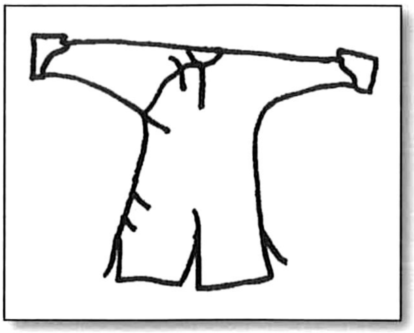
Most bannermen units were uniformed, even though there was – as in Europe – often large variations in trousers and other parts of civilian attire, used beneath the uniform. The habit of forming ad hoc units of men from different formations would, of course, also make their degree of uniformity less than possibly hoped for. Furthermore, when on campaign, the use of uniforms also naturally decreased, as clothing and equipment was repaired or replaced as the situation allowed.

Lower-ranking soldiers, except those in some Green Standards units, wore nonstandard and disparate styles of military dress.

Military dress and appearance changed but little in the period under consideration. Detailed written descriptions by outsiders, such as Jesuits, in the seventeenth century conform in style fully to illustrations and remaining items of clothing from the eighteenth and even nineteenth centuries.[5]

Manchu Robe and Military Jacket

Little remained of the earlier Jurchen dress that had consisted of a knee-length coat of felt or hide with bright appliqués of coloured silk, cotton, or hemp, a decorated apron, and thick leather boots.[6] The traditional Manchu upper-class dress remained, however, consisting of a plain, long silk robe (*nei tao*) with a right-hand closure, centre splits at front and back as well as in the sides, and long tapered sleeves, with narrow cuffs known as 'horse-hoof cuffs' (*ma tixiu*) because of their shape. The cuffs could be folded down or up, and the sleeves pushed up when on informal occasions.[7] This robe was worn below the most important military garment: a short, loose, waist-length riding jacket (*xing gua*), or 'horse jacket' (*ma gua*) as it eventually became known. This was a protective jacket



Robe of the *nei tao* type. (Author's drawing) without collar, with short slits at the sides and wide square cut sleeves just above wrist length, made of closely stitched double-quilted cotton. Originally a common part of Manchu dress, and known to have been used by their Jurchen ancestors as early as in the twelfth or thirteenth century, in the Qing army, the horse jacket became the characteristic garment of a fighting man and was indeed regarded as a basic field uniform for most soldiers. Early in the period when most men were dressed in battle armour, it was worn away from the battlefield; later, the garment was used daily as a regular uniform, whether in battle or not. In the earliest style, the horse jacket was fastened over to the right. Another style was cut with an angular overlap and the lower part cut away from the lower right corner. Later, the horse jacket was more commonly instead fastened down the front, with five loops and brass buttons, in a style inspired by Chinese usage. Bannermen wore horse jackets with a border round the neck opening, the front opening along the hem and the slits of the garment.

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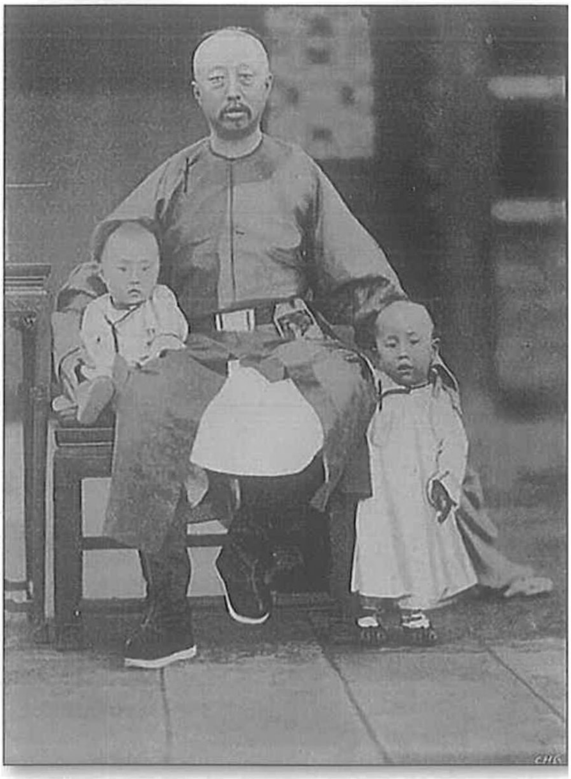
[3] Rawski, *Last Emperors*, p.41.

[4] The Metropolitan Museum of Art, Purchase, the Dillon Fund Gift, 1986 (1986.206).

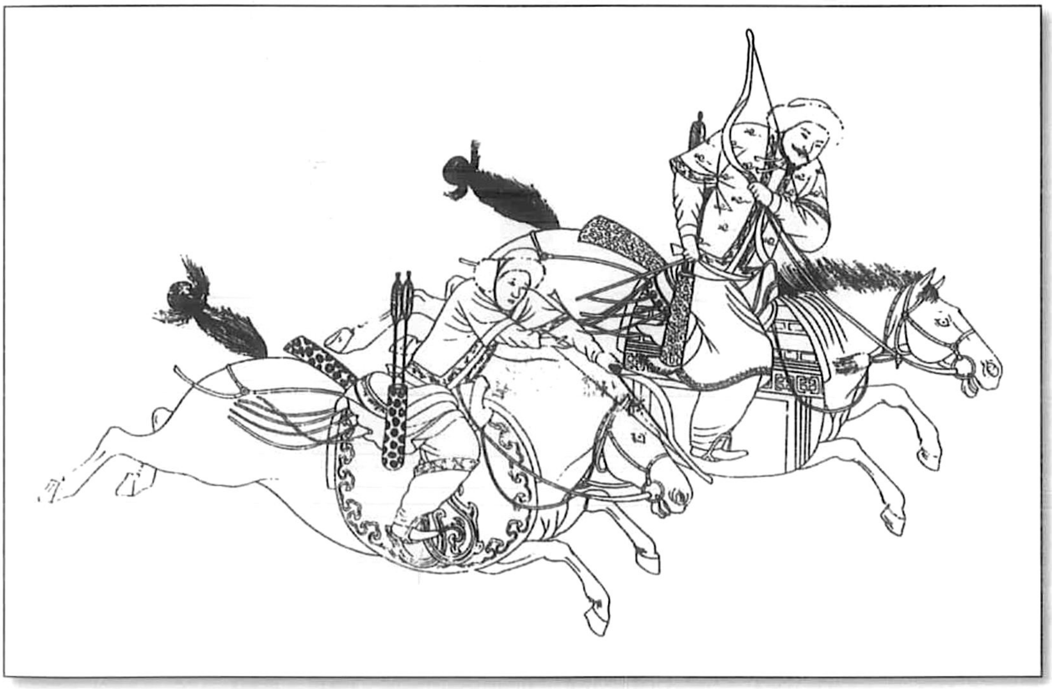
[5] See, for example, Martino Martini [1614–1661], *Bellum Tartaricum, or, The Conquest of the Great and Most Renowned Empire of China* (London: John Crook, 1654), cited in Lynn A. Struve (ed.), *Voices from the Ming-Qing Cataclysm: China in Tigers' Jaws* (New Haven: Yale University Press, 1993), p.51.

[6] Crossley, *Manchus*, p.20.

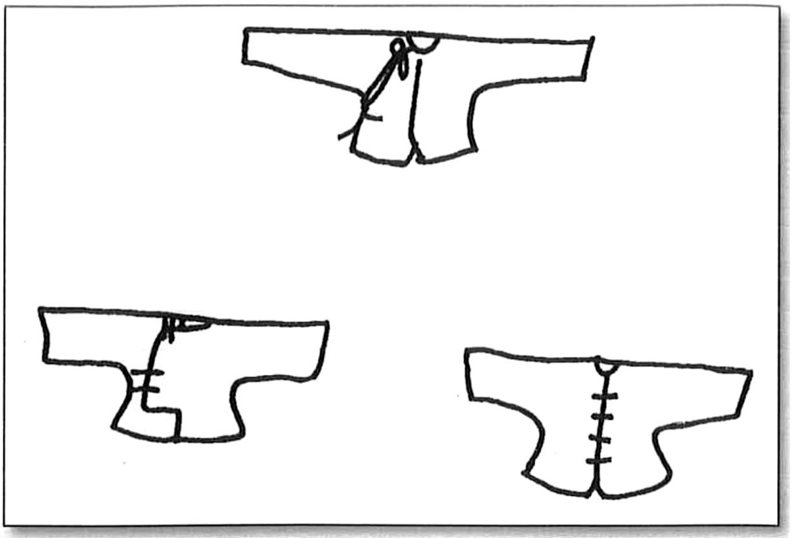
[7] A closely associated item of clothing for Manchu women became known as '*qi pao*' (banner gown). This, nowadays better known under its Cantonese name '*cheung sam*', has remained in use into the present as a close-fitting woman's dress with high neck and slit skirt. The original term indicates the Manchu origin of this garment, the slits of which originally, like for the *nei tao*, were meant to facilitate horseback riding.



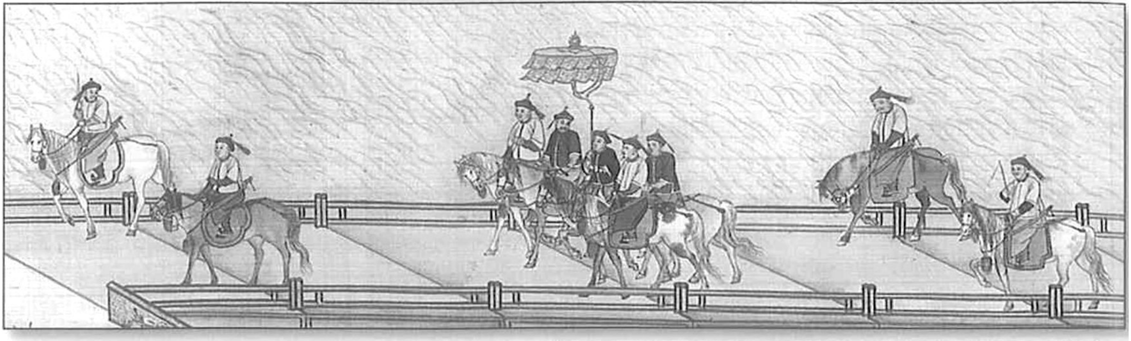
Yixuan, Prince Chun (1840–1891), wearing the *nei tao*, late 1880s. The two boys are his sons Zaixun (left) and Zaifeng (right). (Anon.)



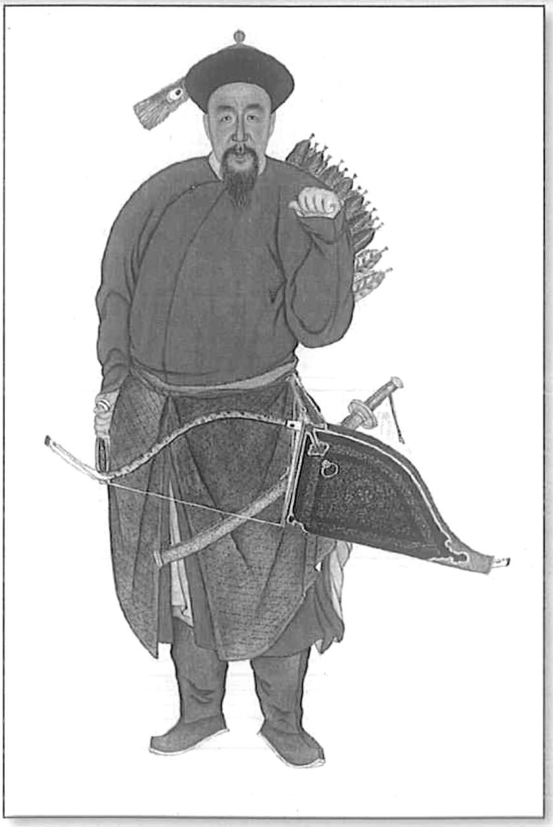
Early Jurchen horse archers, twelfth or thirteenth century. (Anon.)



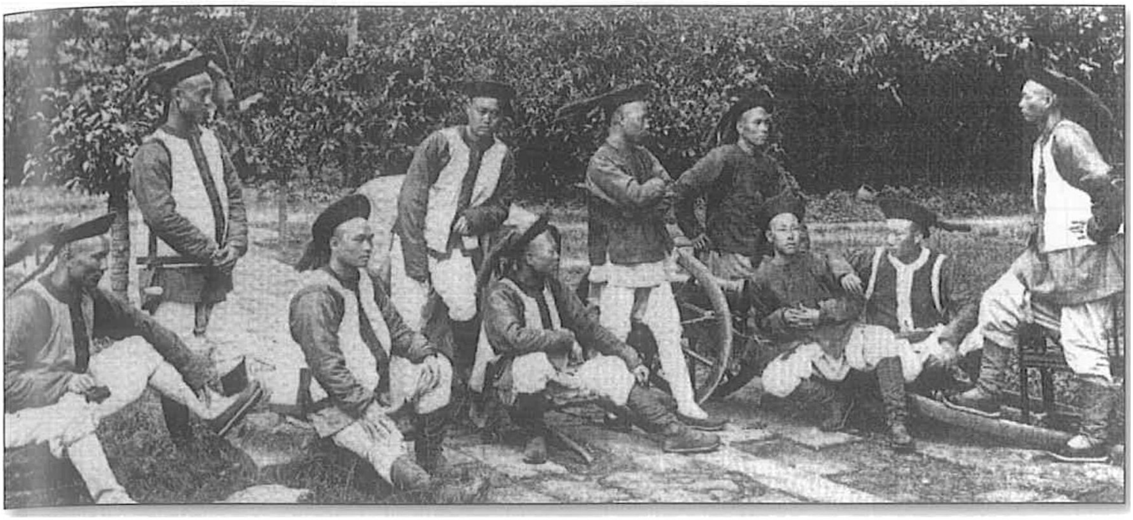
Horse jackets, in three different styles. Top: Horse jacket fastened over to the right. Left: Horse jacket cut with an angular overlap and the lower part cut away from the lower right corner. Right: Horse jacket fastened down the front, with five loops and brass buttons. (Author's drawing)



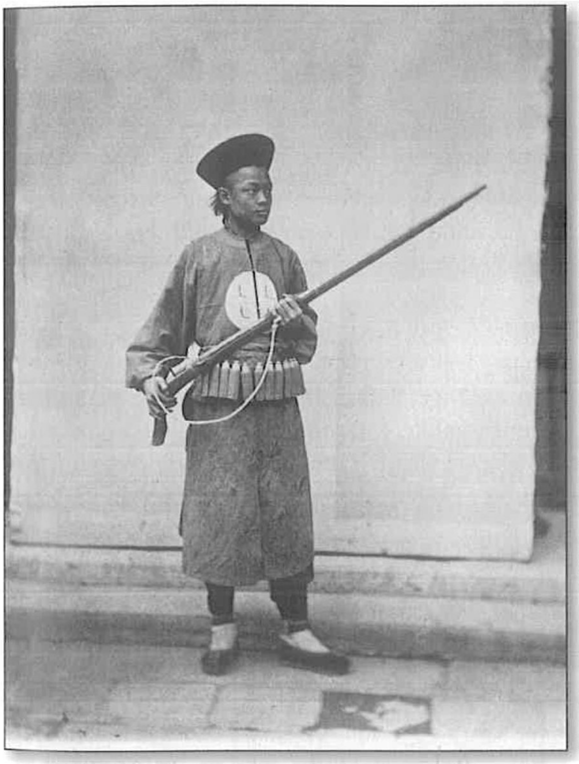
Imperial guardsmen in horse jackets and travel dress with a parasol accompanying the Qianlong emperor during his 1751 inspection tour of southern China. The guardsmen wear quilted leggings to protect their dress. (Xu Yang)



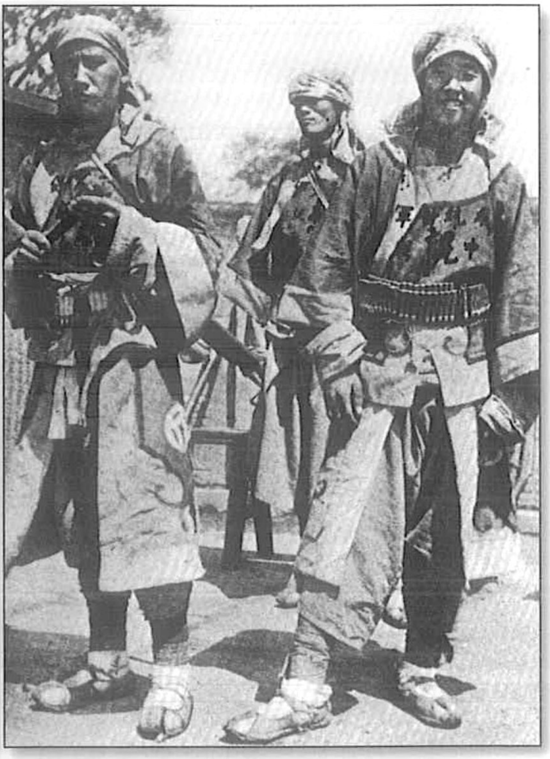
The Qing officer Shu Liang (d. 1798), who distinguished himself during the 1786–1788 campaign in Taiwan. Note his quilted split skirt that protected the legs while horseback riding. (Anon.)



Soldiers wearing the *kanjianer* or *beixin*, a waist-length, sleeveless jacket, as displayed by guards appointed for the British consul, Canton. Unlike many photos from this time, this appears not to have been staged. (John Thomson, c. 1868–1872)



Bannerman on foot with circular badge on jacket, worn on top of his *nei tao*. Although a staged photo, it gives a good depiction of a banner infantryman. He carries a musket with an angled pistol stock, which was the most common style in the Qing army. (John Thomson, 1871)



Soldiers with paired aprons or battle skirts (*zhanjun*), Peking (1900). Earlier ones were identical. (Anon.)

Chinese soldiers, in particular the non-bannermen, instead commonly wore a traditional garment worn by commoners: the *kanjianer* or *beixin*, which was a waist-length, sleeveless jacket worn over the longer robe. It had no collar. For civilian use, it was plain or patterned, lined or unlined according to the season. Its style of fastening was identical to the horse jacket.

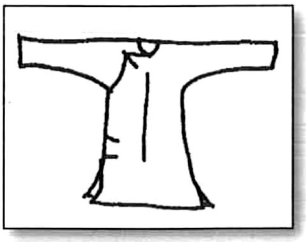
A white, circular badge about 0.25m in diameter was, at times, worn at the front and back of the jacket, upon which were inscribed details of the soldier's unit in black characters. Such badges seem to have first appeared in Chinese armies in Ming China, and the practice seems to have been commonplace. However, no illustrations of jackets with badges seem to have survived from the Qing conquest until the late eighteenth century, so it is impossible to say how widespread the practice was. Besides, by the second half of the nineteenth century, it became increasingly common to inscribe these details directly onto the jacket, without the use of the circular badge.

Some infantry in addition wore paired aprons or battle skirts (*zhanjun*), of a similar type to those used in full armour (see below) but only consisting of cloth. Such paired garments were dyed to match the jacket. In the nineteenth century, these were particularly common among non-regular units. However, earlier, they were also worn by bannermen.

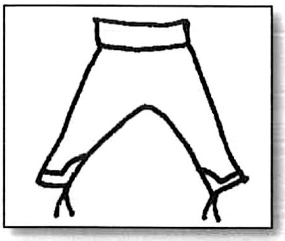
Other Garments

Soldiers customarily wore civilian attire under their uniform jackets. Most enlisted men wore the cotton *shan ku*, a thigh-length robe with a right-hand closure and slits at either side, together with long straight sleeves that occasionally covered the hand but had no cuffs. Others, especially bannermen, wore the already-described, somewhat similar-looking but longer Manchu *nei tao* robe.

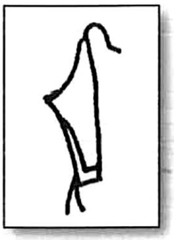
In addition, the soldier wore a cloth belt girdle, serving as belt, and knee-long baggy trousers. The trouser legs were often bound round the ankle with a strip of cloth or, in warm weather, frequently rolled up above the knee while on campaign. In summer, soldiers, farmers, and coolies would often wear very loose calf-length slacks, widely cut and with bare feet and legs. Otherwise, they wore stockings or often a mere bandage of black cloth tied



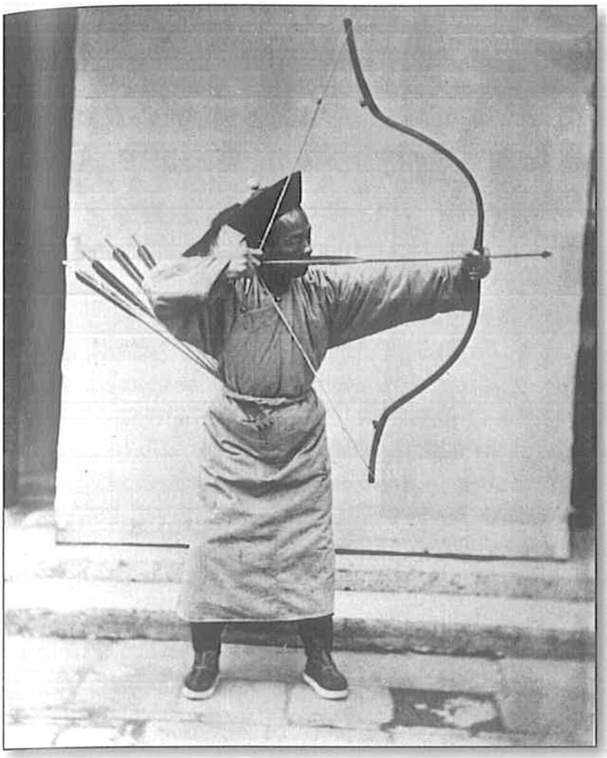
Thigh-length robe of the *shan ku* type. (Author's drawing)



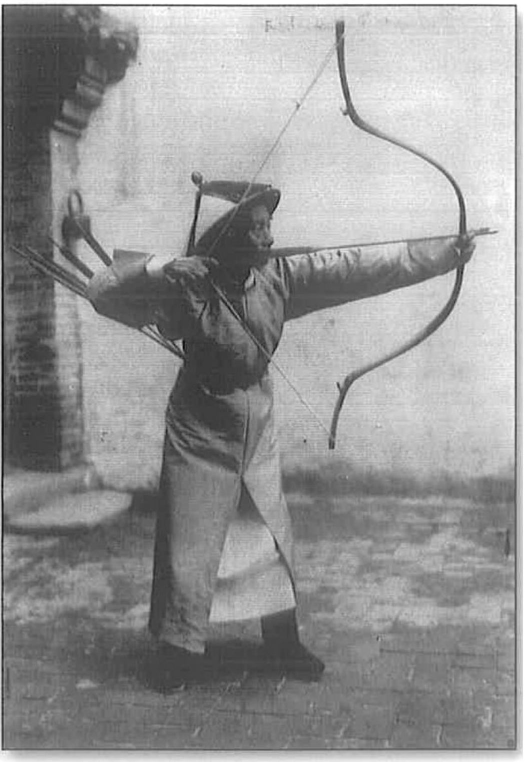
Baggy trousers. (Author's drawing)



Leggings (*tao ku*). (Author's drawing)



Manchu archer wearing a robe of the *shan ku* type with a winter hat. The photo is staged, and a real Manchu soldier would have carried his arrows in a quiver. (John Thomson, c. 1870)



Manchu archer wearing a robe of the *nei tao* type with a summer hat. Another staged photo from about the same period. As noted, a real Manchu would have carried his arrows in a quiver. (Anon.)

round their shins from below the knees to the ankles to protect them from brambles and sharp-edged grass.[8]

In cold or bad weather, as well as for travelling, leggings (*tao ku*) were worn over the ordinary trousers. These were shaped like a pair of trousers without the seat, slipped on over the trousers and fastened round the waist and at the ankles with strips of cloth. In the contemporary paintings of Giuseppe Castiglione (1688–1766), who painted remarkably reliable on-the-spot scenes from the court, imperial guardsmen wear spotted fur leggings while hunting but apparently not or only seldom in battle.

Uniform Colours

The uniform jacket, whether sleeved or sleeveless, of the regular Manchu soldier was supposed to be dyed in the colour of the banner to which he belonged. The jacket was also commonly edged along the front, bottom, and arm openings with a contrasting colour. The banner colours yellow, white

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[8] Jones Lamprey, 'The Economy of the Chinese Army', *Journal of the Royal United Service Institution*, 11:46 (1867), p.418.

(actually a buff shade), blue, and red were all used, edged with red within the corresponding bordered banners, in the same way that the red jackets could be trimmed with white. The system was never fully implemented, however, and other combinations were also worn. Some Peking guard bannermen wore yellow edged in black. In Canton, some units, most likely Green Standards, wore dark reddish brown edged with black. Some bannermen observed in 1858 wore brown edged in pink. Green Standards troops seen in 1855 were dressed in black edged in red. Blue may in fact have been the most common base colour.[9] Observers late in the period also noted green as a base colour.[10]

In the contemporary paintings of Castiglione, Manchu horsemen wear pale blue, dark blue, greyish brown, greyish blue, or grey jackets, usually trimmed in white.

As for the *shan ku* or *nei tao* robe, it was civilian and therefore of almost any colour. Some men wore dark undergarments, frequently blue, which contrasted with the jacket. Others wore some shade of white or reddish pink. Civilian Chinese clothes were sober in colour and generally came in shades of blue, grey, black, brown, and white.

In Castiglione's paintings, Manchu guardsmen wear undergarments of either blueish grey, pale yellow, light brown, or khaki colour. These, too, were regarded as civilian and used by any Manchu. In one painting, an official wears a beige *nei tao* robe as undergarment.

Trousers were generally dyed indigo blue. Stockings were sometimes worn in the same colour as the jacket, but whether this was of design or coincidence is unclear. Loosely fitting black cotton trousers were also frequently used by labourers and common soldiers.[11]

In Castiglione's paintings, Manchu trousers are dark blue, pale blue, or black. Imperial guardsmen in travel dress are depicted with beige or, in a few cases, blueish grey baggy trousers, but, as trousers were not part of the uniform, these colours could also be found among other soldiers.

Footwear

Footwear was also civilian and provided by the individual soldier. All bannermen, being accorded the status of cavalrymen, as well as officers of other arms, wore the Manchu knee-high satin riding boots (*ma xue*), invariably plain black with thick white soles. Boots were always used with full armour. The boots were made with the leg part a little longer so that they lay in folds around the ankle. Leather piping reinforced the front and back seams. The boots had seven-centimetre-thick soles made of layers of felted paper, with a final layer of leather, then whitened around the edges. The soles were inflexible to allow the Manchu to stand in the stirrups when riding. To make the boots easier to walk in, the soles were made shorter than the uppers at the toe.

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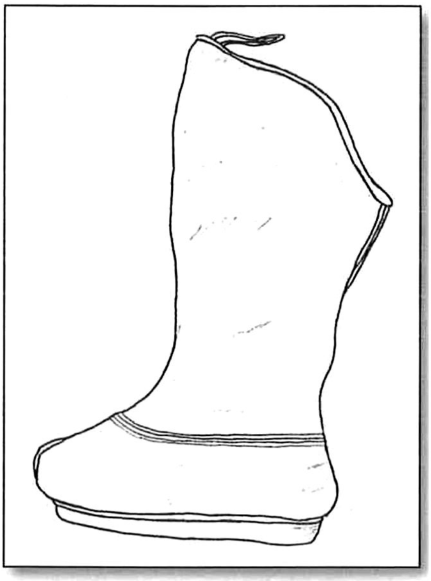
[9] Cromie, 'Military Forces', p.307.

[10] Cavendish, 'Armed Strength', p.714.

[11] See, for example, Lamprey, 'Economy', p.416.

In Castiglione's contemporary paintings, some Manchu bannermen and officers wear brownish grey boots. Whether these were merely old or represented a non-official style remains unknown.

Infantry often wore knee-high, tight-fitting stockings of quilted cotton with short black cloth or hemp shoes. These, too, had a stiff sole, between three and seven centimetres thick, made of layers of felted paper or, alternatively among poorer people, old rags of quilted cotton. Shoes fit either foot, and the sole was quite flat and inelastic, so, like the riding boot, it was made shorter than the upper to make it easier to walk. The toe piece was either curved back round to the sole or of the same width as the heel. The uppers were normally of cotton or, in the case of officers, black satin or velvet. Leather was used only for trimming and binding. In the north, many wore high-vamped shoes with cotton stockings. In rain and snow, those who could used wooden-soled shoes. In summer, many went barefoot or wore mere sandals made from rice or wheat straw, rushes, or perhaps hemp. In winter, makeshift boots made of bundled cloth held together by thongs were common. Shoes and stockings were secured with attached tying cords.



Manchu official-dress riding boots (*ma xue*), early twentieth century. Earlier ones were identical. (Author's drawing)

Blue or white cotton socks with reinforced stitching at the soles and heels were used with shoes and boots, both by bannermen and lower-ranking soldiers.

Headgear

Regular soldiers, that is, all bannermen and Green Standards, wore a characteristic round hat with a black upturned brim and a slightly conical, padded, red crown covered in crimson strands of silk radiating from its apex. This hat style (*damaozi*) was based on the hat worn by officials in full dress. The brim was of black satin or even fur in the case of an officer's hat or velvet for lower ranks. According to contemporary depictions, this hat could probably be worn throughout the year. However, in summer, bannermen often instead wore a round straw hat with turned-down brim and red tassel, a style based on the summer hat worn by officials in full dress (see below).[12]

Non-regular soldiers, that is, those who were not permitted the hat of regular soldiers, wore either a turban (a piece of headgear that became increasingly common among soldiers in the nineteenth century), often blue or brown in colour although black or red were also common, a rattan helmet

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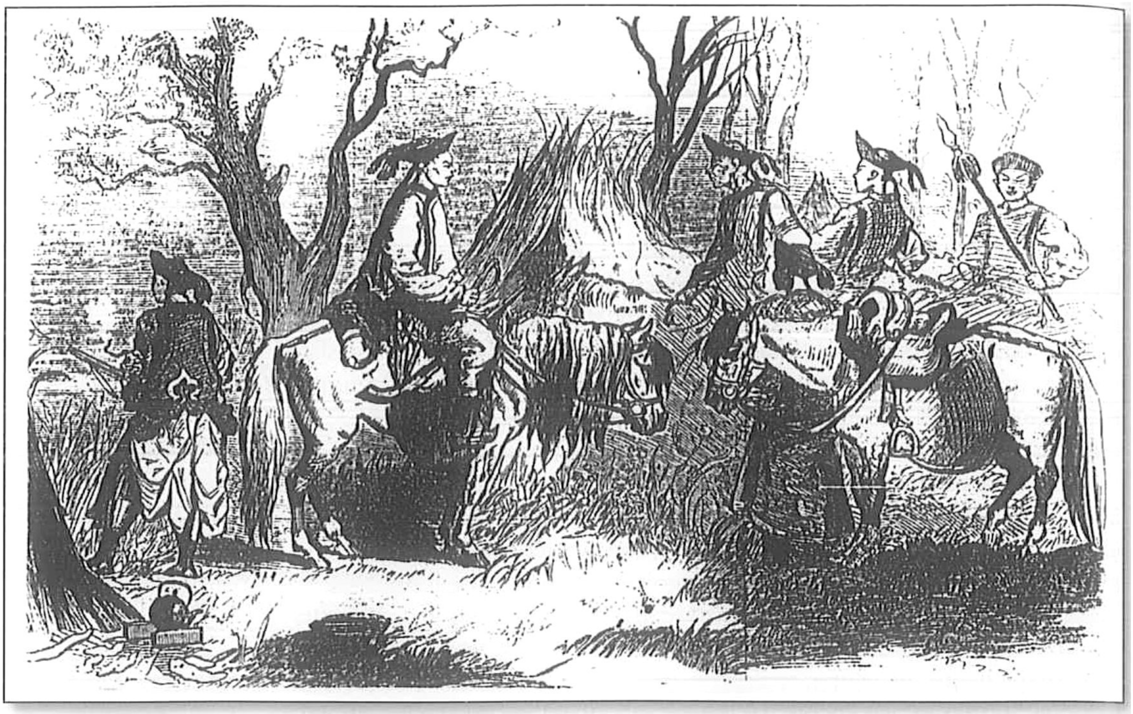
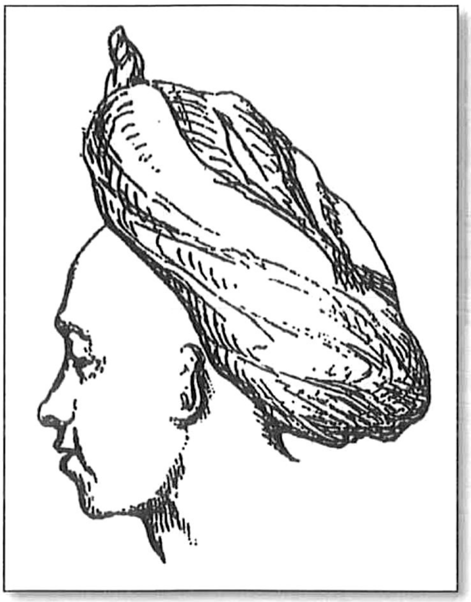
[12] The use of the summer hat by enlisted banner troops is, as far as can be ascertained, only confirmed from very early and very late in the period, although the practice no doubt survived in between. Palafox y Mendoza, *History*, p.262; Cavendish, 'Armed Strength', p.714.

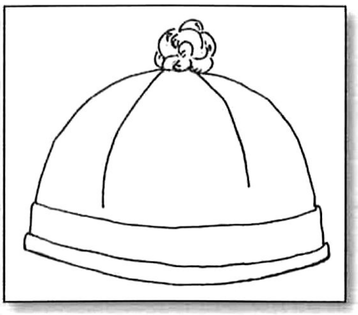


Bannermen in typical black, round hats with upturned brims. Note the matchlock carried under the horseman's leg. (*Illustrated London News*, 12 January 1861)

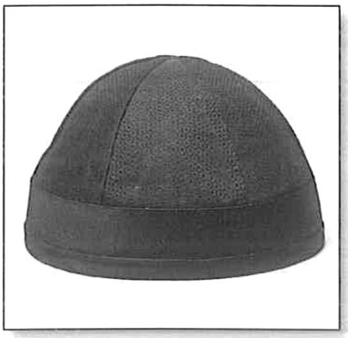
or straw hat, or occasionally the small, round satin skullcap, known as '*liuhe mao*' (cap of six joined parts), its name derived from the fact that it was made of six triangular pieces sewn together. The skullcap, commonly used with informal dress among ethnic Chinese since the Ming period, was usually black, with a red or black knotted silk cord knob (blue if the wearer was in mourning) on the crown.



Turban. (Jones Lamprey, 1867)



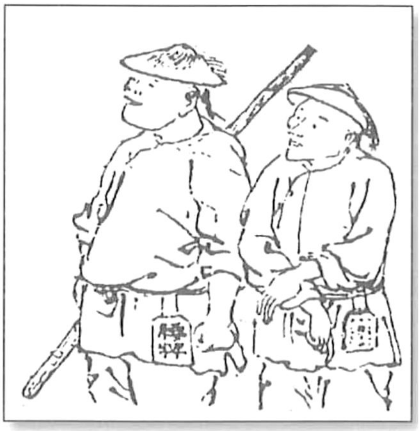
Skullcap (*liuhe mao*, 'cap of six joined parts'). (Author's drawing)



Skullcap (*liuhe mao*, 'cap of six joined parts'). (National Museum of Ethnography, Stockholm)

A cap made of quilted cotton bearing an identification band, with protective flaps for the ears and neck, was also in common use, especially in the north. The cap was secured with attached tying cords.[13]

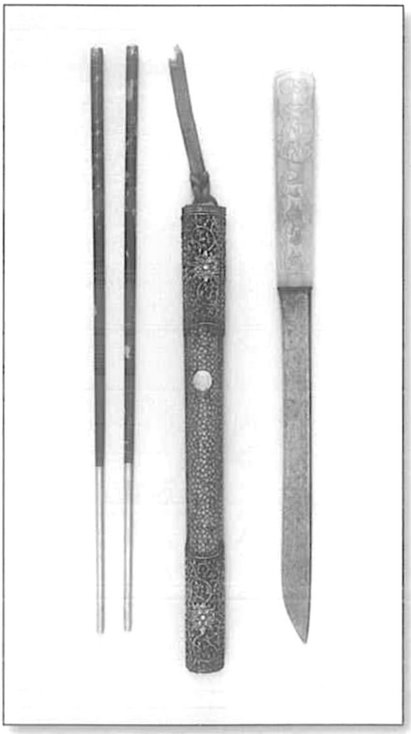
Black heart-shaped embroidered ear covers were not unusual in winter. It was also quite common among peasants and labourers to wind the queue around the skullcap, or even to dispense with a hat and wind their queue round their head in a coil, or else tie any towel or cloth in the form of a turban. To wind the queue in this way was, however, regarded as somewhat rude, and, in the presence of a superior, the queue had to hang free.[14]



Two porters. Note the wooden tags (*yaopai* or *bingpai*) carried from the belt. (Anon.)

Other Equipment

Soldiers carried a wooden tag (*yaopai* or *bingpai*) at the belt, with name, age, birthplace, unit, and date of enlistment.[15] Most soldiers would also carry a purse, tobacco pouch, and a small case, frequently silver mounted or otherwise decorated for those who could afford it, containing a knife, chopsticks and perhaps a pickle spear. Some might carry a fan case attached to the belt. A cavalryman might instead carry his fan case in his boots. Pipes, fans, and even umbrellas were common possessions. There was no rule against the use of an umbrella in wet or hot weather.[16] In the mid-seventeenth century, the Jesuit Martino Martini (1614–1661), who published the first substantial European work on the Manchu conquest, pointed out, 'At their Girdle there hangs on either side two Handkerchiefs to wipe their face and hands; besides, there hangs a Knife for all necessary uses, with two Purses, in which they carry Tobacco, or such like Commodities'.[17] At the belt, the soldier also carried, commonly in the front, a box holding arrow heads, bowstrings, and similar archery equipment. Later in the period, the men, now musketeers, instead carried cartridges, shot, and gunpowder flasks at the belt.



Chopstick and knife case, eighteenth or nineteenth century. Sheath covered in shark skin. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)

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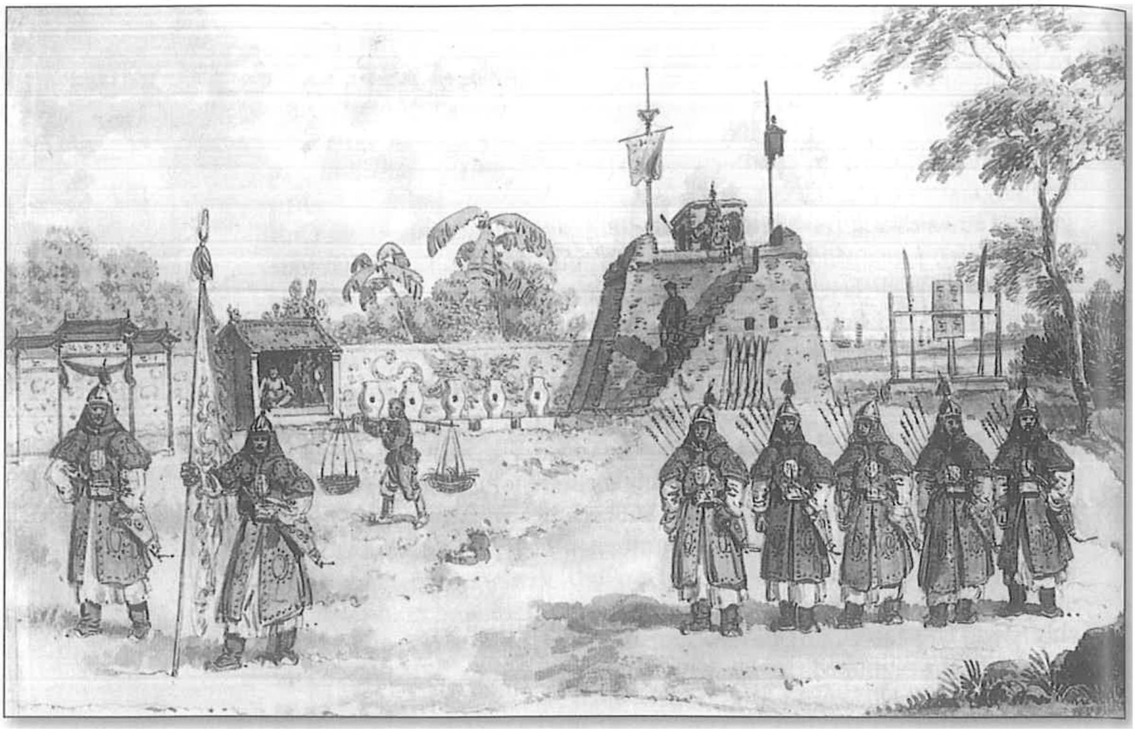
[13] Huang, *Complete Book*, p.476.

[14] Garrett, *Traditional Chinese Clothing*, p.64.

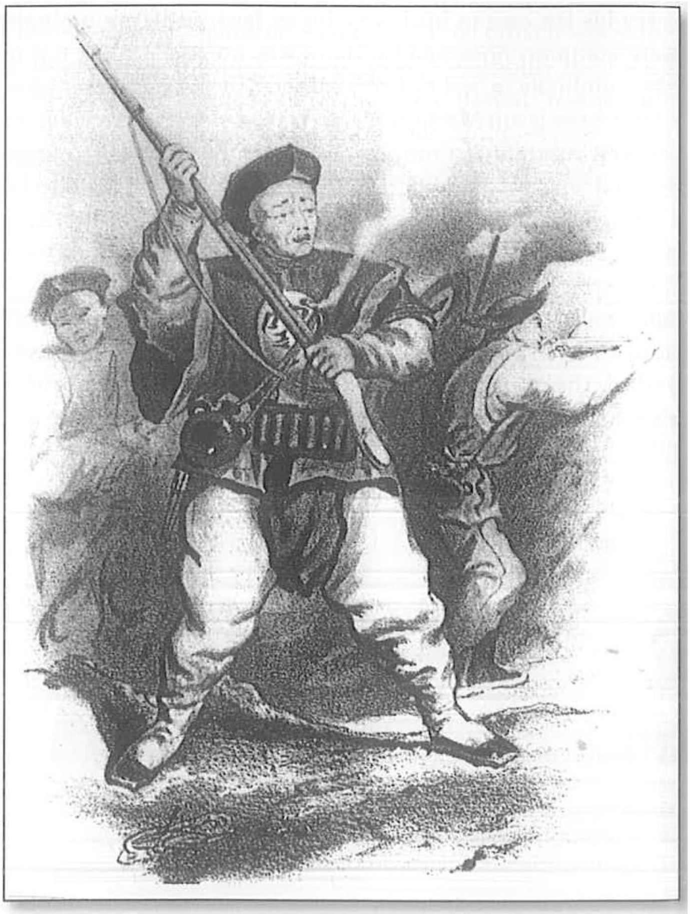
[15] Lamprey, 'Economy', p.413.

[16] Lamprey, 'Economy', p.418.

[17] Martini, *Bellum Tartaricum*, cited in Struve, *Voices*, p.51.



Armoured soldiers by a fort near Canton, showing the frontal belt box with archery equipment. (William Alexander, 1793)



Bannerman with gunpowder flask and cartridges carried at the belt. (Robert Swinhoe, 1860)

Winter Dress

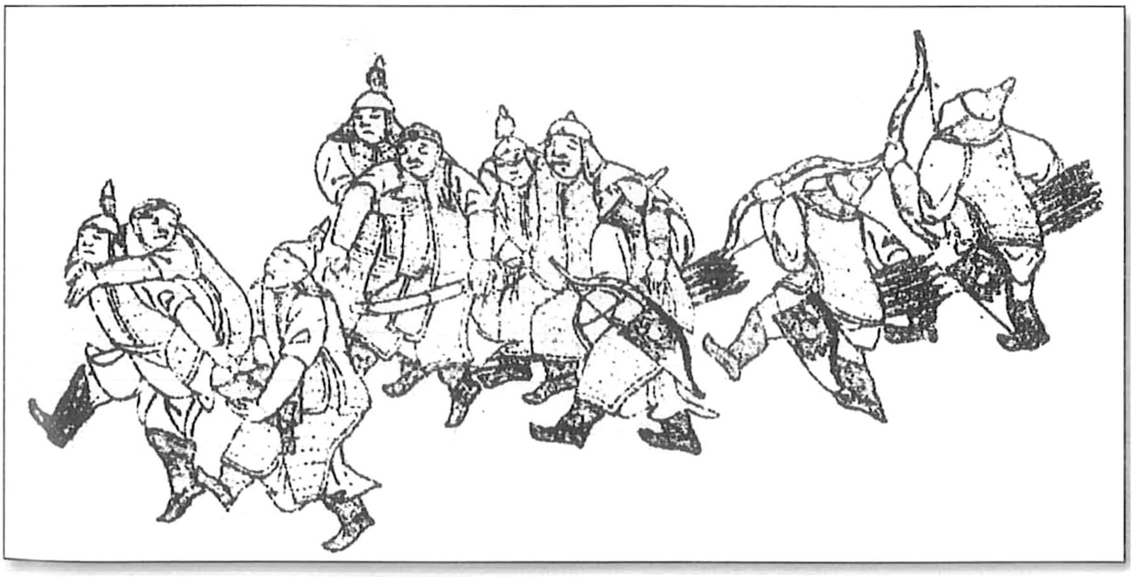
In winter, especially in the cold north, Qing soldiers adapted to the weather as best they could, wearing sheepskin, fur coats, or more commonly several, often five but reportedly up to a dozen, ordinary jackets one over another. Many wore wadded jackets and trousers, which had the disadvantage of easily catching fire. Double-layer cotton trousers and jackets, padded with cotton, were common.[18] The thick layers of clothing served as makeshift protective armour and were even known occasionally to stop a musket ball. Quilted leggings were pulled over the trousers and secured to the girdle by loops. The soldier used mittens to protect his hands.

Few Chinese soldiers were employed in the northern campaigns, as the Qing wisely seem to have relied chiefly on their hardier Manchu and Mongol troops. Serving as cavalry, they were more suitable for the terrain as well as the climate.

Battle Armour

Chinese armour changed dramatically in character with the fall of the Ming. Ming soldiers had relied on elaborate armour and round helmets of a design fundamentally not very different from those used a millennium earlier. The Manchus swept away much of these traditions and instead introduced, or rather reintroduced, Inner Asian armour and helmet styles.

During the seventeenth century, it appears that many, perhaps most, Manchu soldiers continued to wear armour on the field of battle. Already during a battle in 1594, in which Nurgaci confronted and defeated his main rivals for power among the Jurchen, he gained 3,000 horses and 1,000 suits



Early Manchu armour. Wounded soldiers are evacuated, while dismounted archers advance against the enemy. The brigandine armour is of characteristic Manchu type. Note the quilted skullcap worn under the helmet. (*Taizu shilutu*) of armour among more than 4,000 slain enemies. If true, this indicates that, even then, possibly a quarter of the army was equipped with full armour. Twelve years earlier, in 1582, only 10 percent of Nurgaci's men, as noted, had complete sets of armour. Battle armour, unlike the ceremonial armour used by officers and the full armour worn by armoured cavalry until late in the period, was simple and utilitarian. Early Manchu armour was chiefly made of leather and cloth, with some metal parts.[19]

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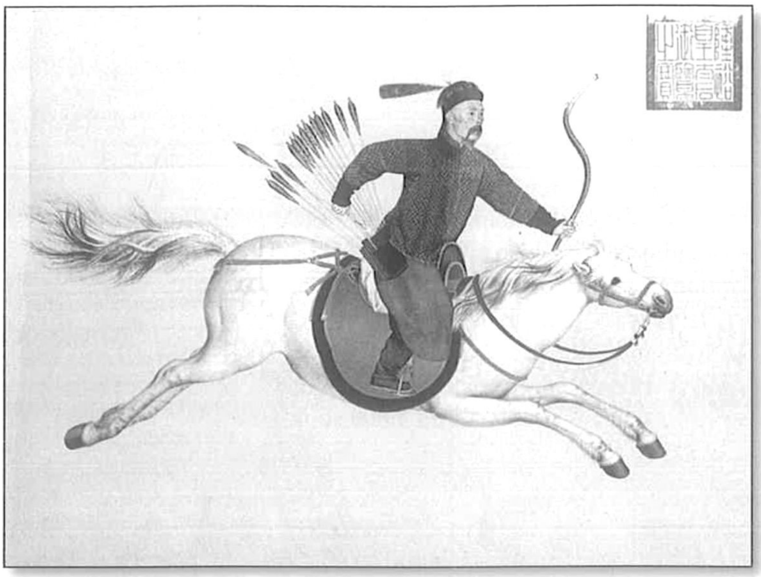
[18] Cavendish, 'Armed Strength', p.714; Lamprey, 'Economy', pp.416–17.

Armour came in a number of varieties. Most basic was perhaps a mere jacket of quilted cotton, made of many layers of cotton cloth stitched one over the other to make a flexible, reasonably light, and fairly arrow-proof protection, or alternatively thickly wadded with tough bark-pulp paper. Various sources mention that the fabric was made of from 10 to 20, and perhaps as many as 60, layers of fabric. This armour was, it seems, particularly used on the northern frontier, where it no doubt also helped to keep the soldier warm in winter.



Qing officer Ma Chang, dressed as a Manchu mounted archer in chainmail over quilted armour, fought successfully in the 1755–1759 Ili campaign and, in particular, the Battle of Qurman 1759. (Giuseppe Castligione, 1759)

A more elaborate style of armour, so common that it must be called characteristic of the Manchu empire, was the brigandine or *ding jia* (armour with nails), so named because it was reinforced with rows of round-headed rivets (*ding*) of iron or brass, visible on the outer fabric, which was generally cotton. The rivets secured the armour plates that lined the inside of the armour. Innermost was generally an internal cotton lining. Brigandine armour of this particular construction may have been originally devised in China; however, this style, formerly used by the Mongols, now became characteristic of the Manchus. This full armour was worn by officers as well as armoured cavalry. Officers frequently had gilded metal rivets that also doubled as decoration. The internal plates were made of iron, copper, or rawhide, depending on the cost and quality of the armour. A common soldier's armour was frequently made of very thin, soft iron, while an officer's armour relied on tough, elastic steel. The cotton outer fabric (officers used silk, often decoratively embroidered) was quilted to a thickness of up to five centimetres, wadded with a suitable filling, and dyed in a uniform colour within the unit.[20]

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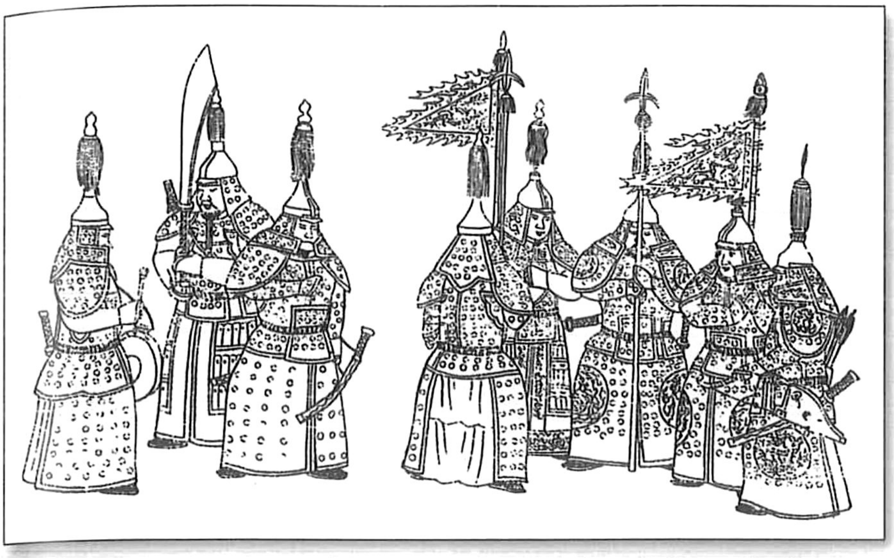
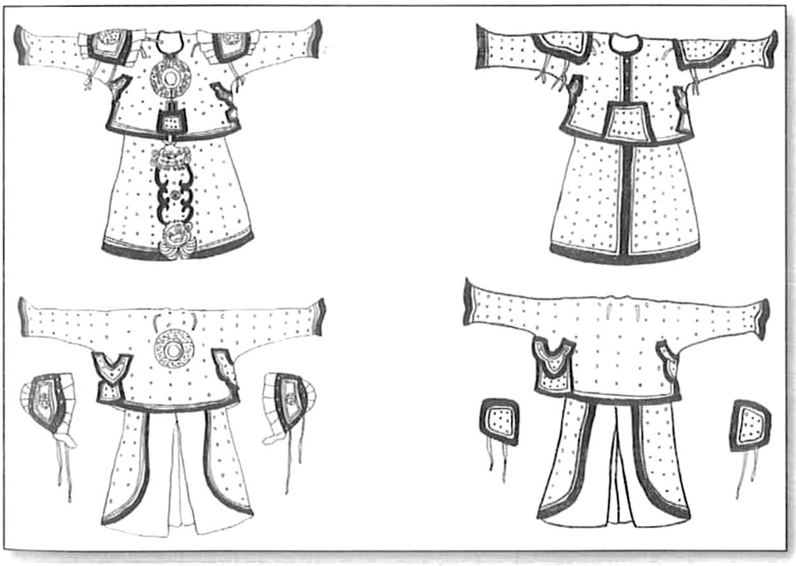
[19] Crossley, *Manchus*, pp.51–52.

[20] H. R. Robinson, *Oriental Armour* (London: Herbert Jenkins, 1967), pp.146–50.



A group of Chinese-martial (*hanjun*) bannermen wearing brigandine (*ding jia*) armour. (Okada Gyokuzan, *Morokoshi meishō zue* 4, 1806)

Manchu armour consisted of several pieces: a short jacket or bodice, with or without sleeves, an ankle-length divided skirt akin to a split apron, and a number of additional and separate protective sections buttoned or fastened together with flat cords over the jacket. These included semicircular shoulder defences, deep crescent-shaped armpit gussets beneath the arms, and a generally rectangular groin apron over the lower front of the jacket. Another rectangular section was often mounted from the left armpit gusset. The right side needed no extra protection, as the quiver was often reinforced with metal. The reinforced quiver was known occasionally to save the soldier's life.[21] When on foot, an additional and larger groin apron was often suspended over the opening in the split, apron-like skirt. Each armour section was lined with plates held to the piece by rivets.



Full armour for officer (left) and bannerman (right), respectively. (Anon.)

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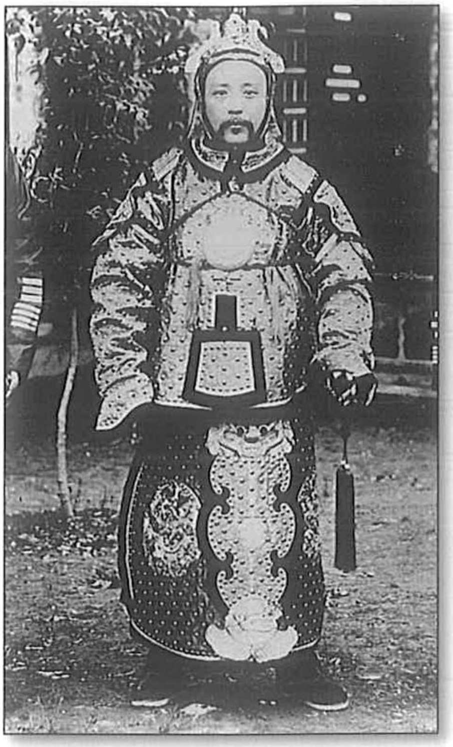
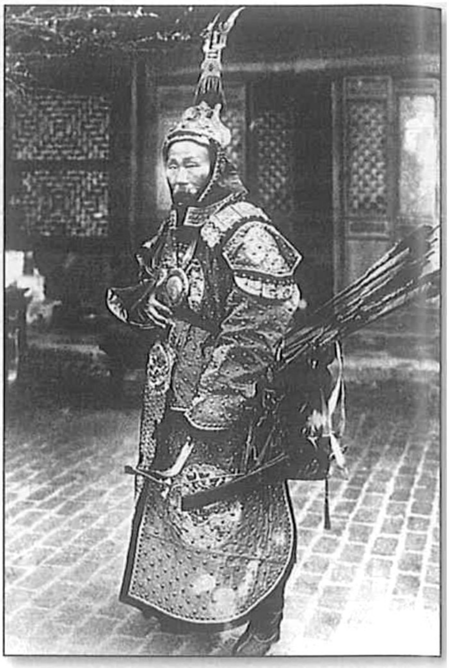
[21] So was the Manchu armoured cavalryman Dengse saved in 1681, as noted in Di Cosmo, 'Elephants', p.18; Di Cosmo (trans.), *Diary*, p.66.



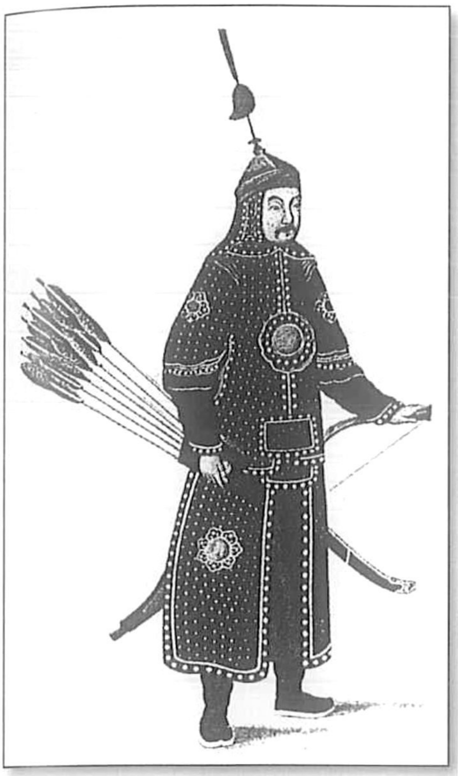
Officer on foot in full armour with groin apron, 1896. The photograph depicts General Yuan Shikai (1859–1916), a Chinese officer whose career included periods as Qing Resident in Seoul, Grand Councillor, Prime Minister, President of the Republic of China, and, for a while, the Hongxian Emperor of the revived Chinese Empire. (Anon.)



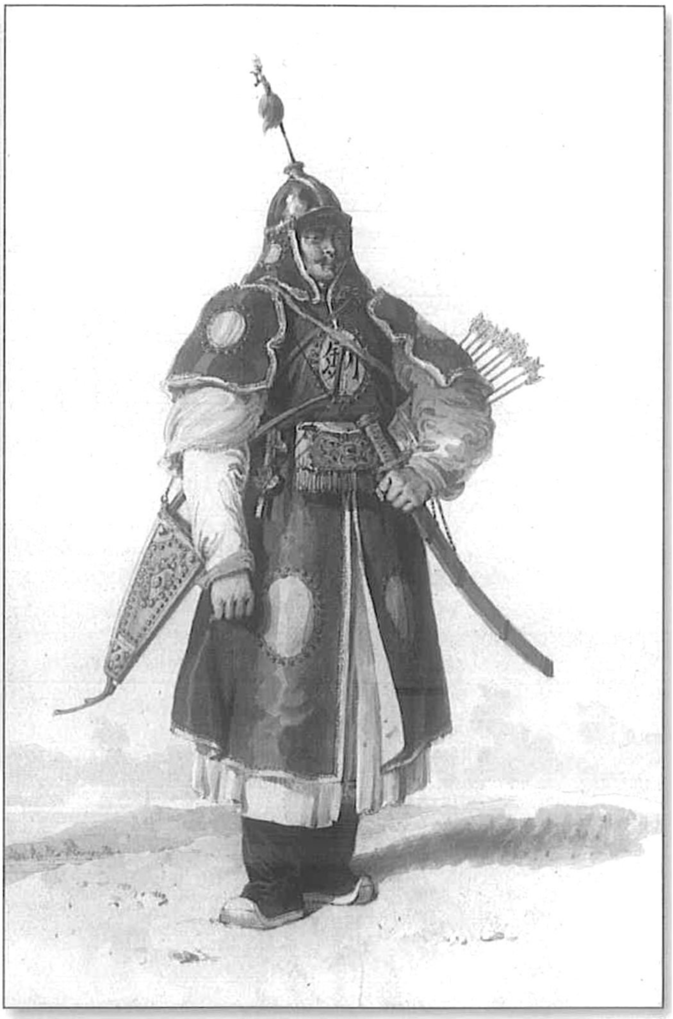
Officer on foot in full armour including groin apron, c. 1896–1899. He carries the traditional bow and single-edged sword, customarily hanging with the hilt facing the rear. The photograph depicts General Su Yuanchun (1844–1908), a Chinese officer who fought the French with some success in the Sino-French War of 1884–1885. (Auguste François)

Sleeves might be separate, fastened to the shoulders by buttons or straps, and perhaps built up of narrow horizontal metal splints attached to the outer fabric. The full armour might also include additional external sections, for instance, circular silvered copper breastplates (*huxinjing*, 'mirror for protection of the head') on the breast and back. The breastplates of some armoured cavalrymen appear to have been inscribed with characters denoting the unit to which they belonged. Other additions might be a border of three or four overlapping metal splints on the upper edges of the shoulder pieces. Such metal splints and plates were often gilded. On ceremonial armour, they were of copper gilt, pierced and engraved with various dragon designs. Splinted plate vambraces, tied round the forearms, were also occasionally used. Some divided skirts had rows of exposed narrow lamellae secured by rivets within a broad frame of fabric. Others had separate iron knee guards as reinforcements.

On his head, the soldier wore a conical helmet usually of Mongolian style, made of leather, iron, or copper, typically with concave sides and a small brow-plate cusped over the eyes. The helmet was often lacquered or otherwise decorated. The cheek and neck flaps fastened with buttons across the throat and could be lined with plates. Soldiers in the light commando

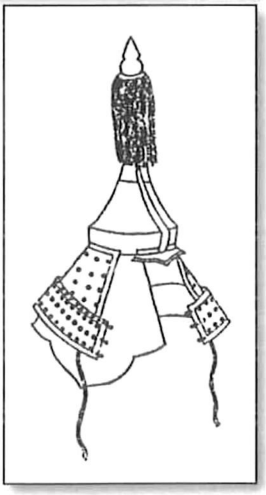


Armoured soldier with breastplates, c. 1800. (British Library)



Armoured soldier with breastplates. The artist accidentally switched the quiver and bow case. In reality, a soldier carried the bow case on the left and the quiver on the right. (William Alexander, 1793)

regiments wore cheek and neck flaps of mere cloth. The helmet was crowned with a tall spike or crest-tube that usually bore a tassel variously of horsehair dyed red, silk fringing, sable tails, feathers and netting, or a small red flag. The helmet of a ranking military mandarin was set with gems, for instance, coral or sapphire, according to his grade. The helmet lining consisted of a quilted conical skullcap, usually with chin cords, tied to the inside of the helmet or, at least in the time of Nurgaci, worn fastened to the head. Ranking officers wore black silk padded caps.[22]



Early helmet. (Anon.)

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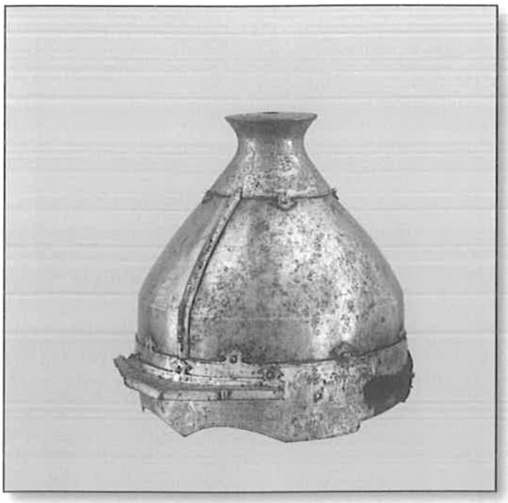
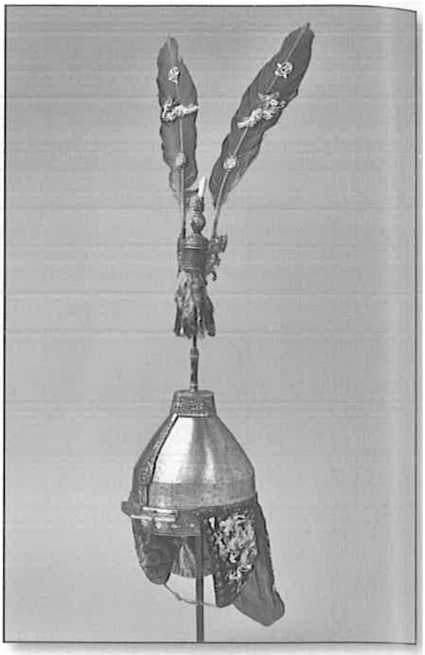
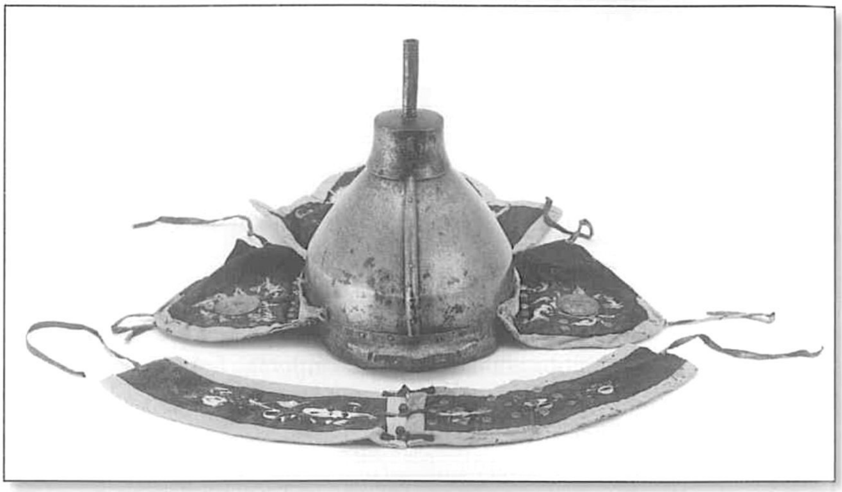
[22] Robinson, *Oriental Armour*, p.150.



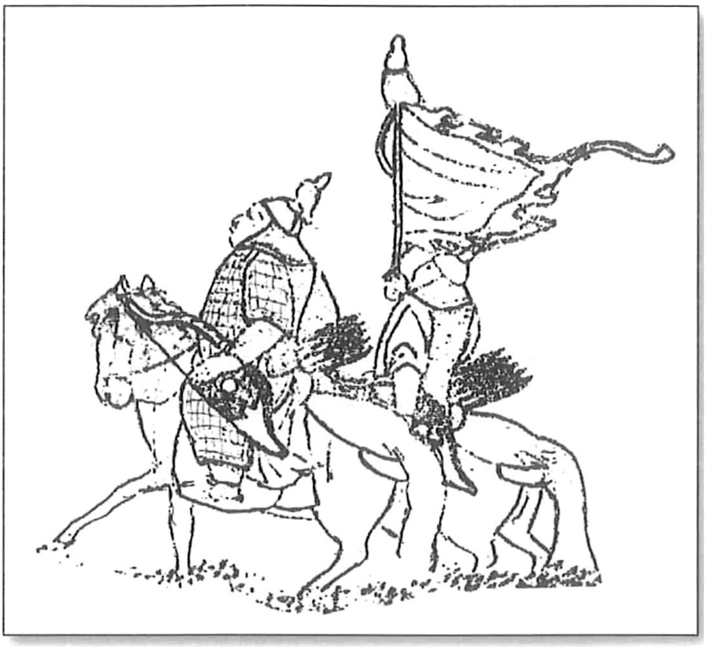


Officer's helmets. The one with a feather crest worn by an officer of the light commando regiment. (The Metropolitan Museum of Art, New York)



Helmet with cheek and neck flaps of cloth for a trooper of the light commando regiment. (Peter Dekker, Mandarin Mansion)

Quilted conical skullcap of the type worn as lining inside a helmet. (Peter Dekker, Mandarin Mansion)

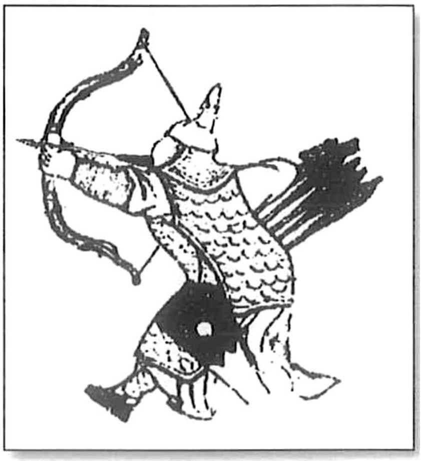


Lamellar armour. (*Taizu shilutu*)

The use of armour declined during the Qing period. By the time of the Qianlong emperor (1736–1795), suits of armour that consisted of mere padded cloth with gilded rivets already appeared. Although outwardly similar to real armour, the cloth was not backed by plates. Armour was fast changing into a mere uniform, worn by officers in particular more as military insignia than a form of defence.[23]

In 1820–1821, one George Timkowski claimed that the armoured banner cavalrymen of Peking still carried bamboo wicker shields.[24] This seems unlikely since no contemporary illustrations, or, for that matter, any earlier or later ones, illustrate this. Yet bamboo wicker shields certainly existed at the time, so some bannermen might have used them.

According to seventeenth-century illustrations, the early Manchus also used other types of armour, notably, lamellar and scale. So are, for instance, Nurgaci, other commanders, and some soldiers depicted in lamellar armour not unlike that used by Mongols and Tibetans in earlier centuries. While the majority of his soldiers clearly wore brigandine, some are depicted in scale armour. Except for the material employed, the style of armour was fundamentally the same. Older types of armour were also retained in some areas. A few cuirasses of copper scales sewn onto heavy cotton cloth are preserved, for instance, one from Chengdu, Sichuan province, presently in the Field Museum, Chicago. It is dated to the eighteenth or nineteenth century. Such armour was not much changed from what was used by earlier Chinese dynasties, even though a Manchu garrison was located in the city.[25] Yet another, even more archaic-looking scale cuirass is preserved in Nanchang.



Scale armour. (*Taizu shilutu*)

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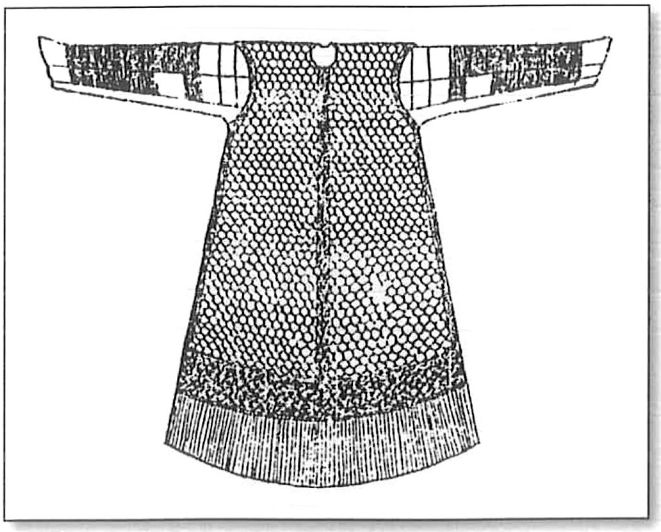
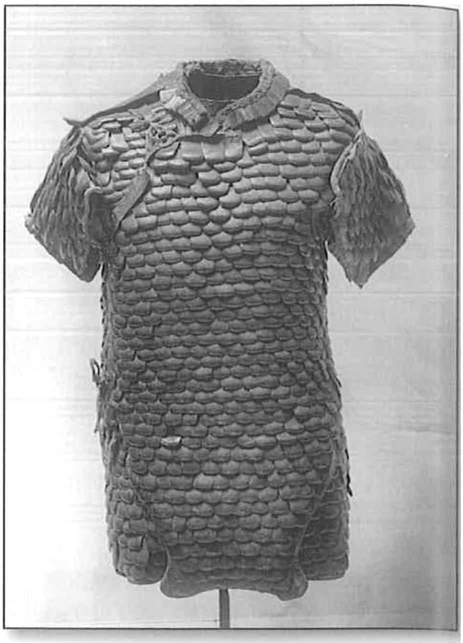
[23] Robinson, *Oriental Armour*, p.149.

[24] Heath, *Armies of the Nineteenth Century: Asia 2*, p.62, citing George Timkowski, 'Army of China', *Naval and Military Magazine*, 1–2 (1827).

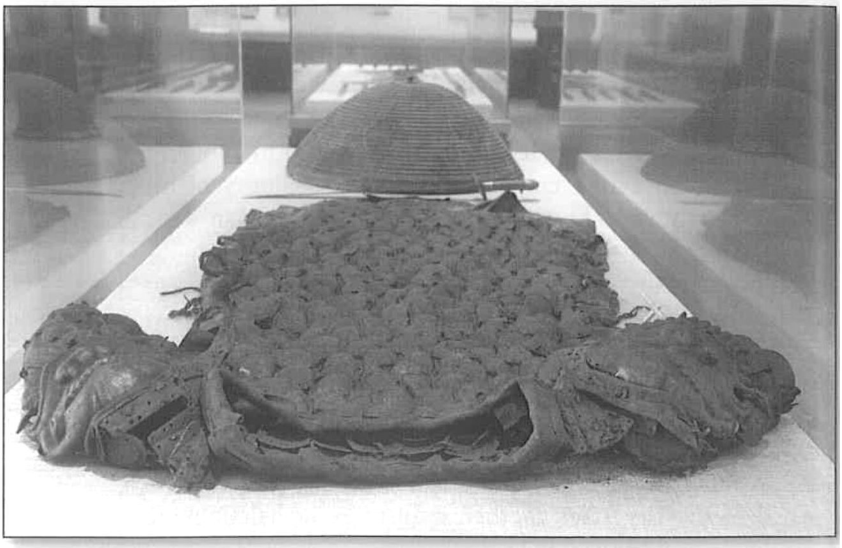
[25] Robinson, *Oriental Armour*, p.144. A similar scale cuirass but of unknown provenance is illustrated in George C. Stone, *A Glossary of the Construction, Decoration and Use of Arms and Armor in All Countries and in All Times, Together with Some Closely Related Subjects* (Portland, ME: Southworth Press, 1934), p.22.



Scale armour. This particular scale cuirass was intended for presentation to the 'Martial Champion', the title given to the highest-scoring candidate of the Imperial Military Examinations held in Peking. (*Huangchao liqi tushi*, 1759)



Scale armour. (Field Museum, Chicago)



Scale armour attributed to the Qing period, Pavilion of Prince Teng (*Tengwang ge*), Nanchang. (Photo: Gary Todd)

An alternative type of scale armour, although presumably more of a ceremonial nature than intended for use in war, consisted of an armoured robe with a red silk lining covered with overlapping rows of small copper scales. From the lower rim of the robe hung green ribbons from which red tassels were suspended. Such a scale cuirass was, at least according to regulations dated 1759, awarded to the top graduate (*zhuangyuan*, 'martial champion') in the Imperial Military Examinations.[26]

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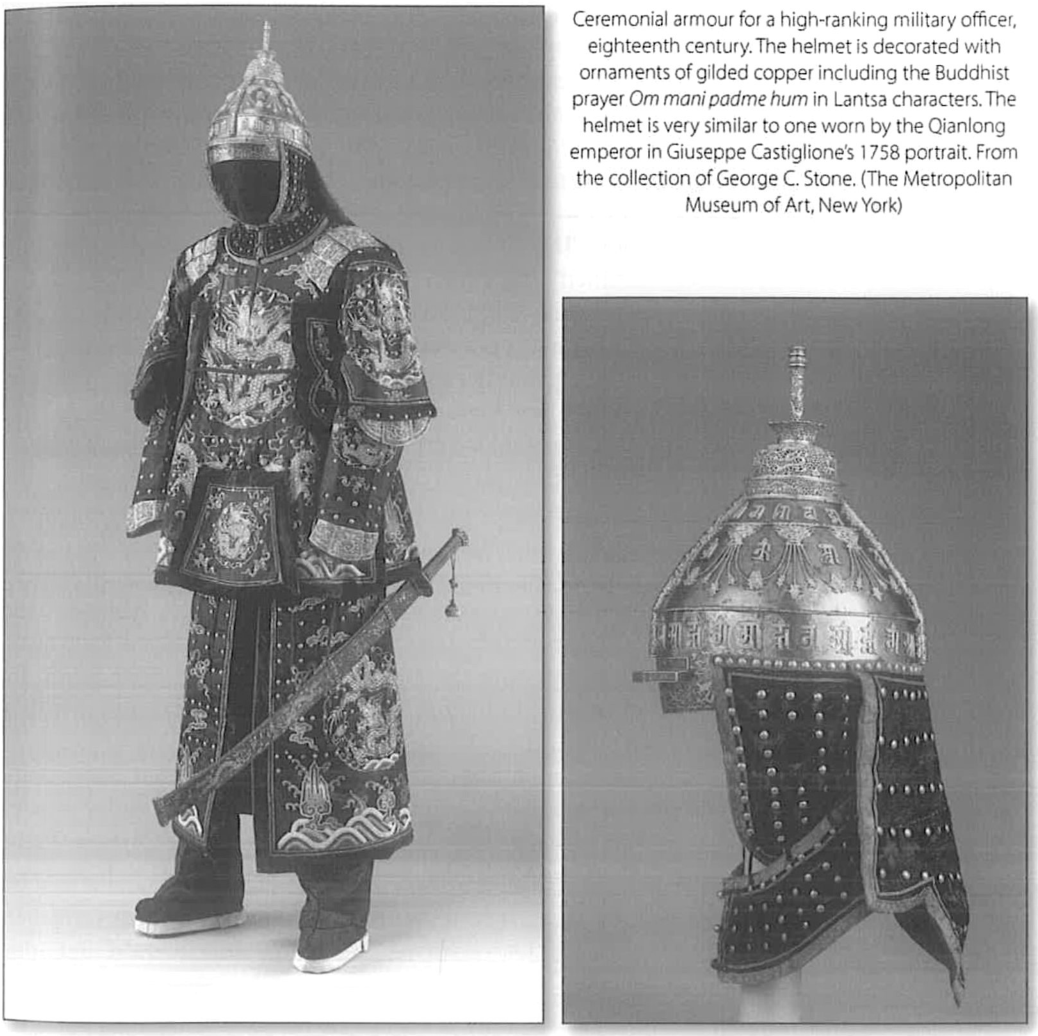
[26] Donald J. LaRocca (ed.), *Warriors of the Himalayas: Rediscovering the Arms and Armor of Tibet* (New York: The Metropolitan Museum of Art/New Haven, CT: Yale University Press, 2006),

Finally, there was chainmail. We have already seen its use in Tibet, and some Manchus wore it, too. So did many Mongols in Qing service.

Ceremonial Armour

Ceremonial armour worn by nobles, generals, and high-ranking officials was similar in style to the regular Manchu battle armour but made of more elaborate materials, commonly satin padded with cotton or occasionally even silk floss, and edged and lined with silk. The armour was covered with metal rivet-heads and embroidered with dragon roundels. With time, ceremonial armour grew increasingly elaborate and less protective until it was used without internal plates as a mere ceremonial satin uniform.[27]



Ceremonial armour for a high-ranking military officer, eighteenth century. The helmet is decorated with ornaments of gilded copper including the Buddhist prayer *Om mani padme hum* in Lantsa characters. The helmet is very similar to one worn by the Qianlong emperor in Giuseppe Castiglione's 1758 portrait. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)

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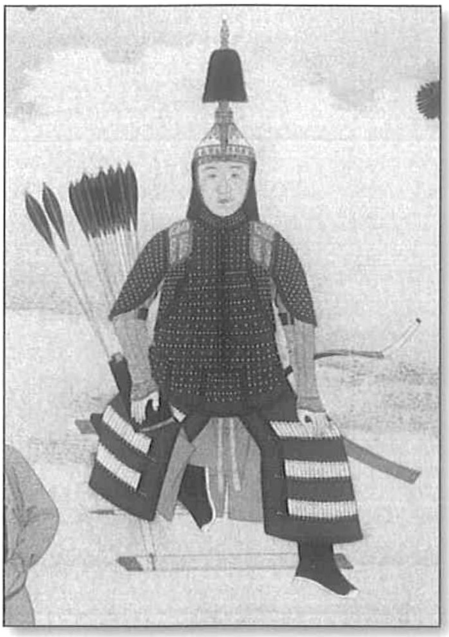
pp.144–45, which also provides an illustration of a surviving specimen.

[27] Robinson, *Oriental Armour*, p.149; Stone, *Glossary*, pp.55–58.

Ceremonial armour worn by the emperor during a military inspection was similar in style but obviously yet more elaborate. Several have been preserved in various museum collections. The ceremonial armour worn by the emperor was of silk brocade and gilded copper plates, with each section heavily padded and lined with silk. Earlier armour was even more elaborate, as is seen in that worn by the Qianlong emperor when reviewing his soldiers (a portrait by Castiglione, reprinted in the colour artwork section). Here, the entire suit of armour is covered in imperial yellow silk embroidered with gold dragons, some red lines, and a black and white wave pattern. The edging is black. Judging from a similar preserved suit of armour, the inner lining is pale blue. On his lower forearms, the emperor wears gilded vambrace-like sleeves.[28] Illustrations by native artists show the existence of the same type of armour, for instance, in an earlier painting of the Kangxi emperor in battle armour in the Palace Museum, Peking. In Castiglione's portrait, the Qianlong emperor's boots are yellow with black edging and red decorations, with the standard white soles.



The Kangxi emperor in battle armour. (Palace Museum, Peking)

The emperor wore a helmet of the normal type with a tall spike on the crown, made of lacquered iron or leather with a pierced and engraved copper or silver gilt inlay design of dragons and wave patterns, as well as some red gems. The helmet was adorned with a black tassel with some red strands inside. The Qianlong emperor's helmets were commonly inscribed with gilded protecting incantations in Lantsa, the Devanagari script used in Tibetan Buddhist writings. One such helmet is preserved in the Palace Museum, Peking.

The Qianlong emperor's winter armour is also preserved in the Palace Museum. It is made of grey brocade, with a multitude of gilded copper rivets and blue and black edging. The black lacquered leather helmet has a red tassel and is again inscribed with gilded protecting incantations in Lantsa.

Some imperial suits of armour, for instance, the one of the Xianfeng emperor (r. 1851–1861), which is preserved in the National Palace Museum, Taipei, were instead made of narrow gilded plates on yellow brocade edged with black and do not have the more usual brigandine rivet-heads. Its accompanying helmet is of silvered steel, decorated with a red tassel.

A number of ceremonial suits of armour without internal plates were taken by European armies in the nineteenth-century wars and today remain in, for instance, the Wallace Collection, London, *Musée de l'Armée*, Paris, and the *Museo Oriental de Valladolid*, Spain. They are made of rich blue and gold brocade, edged with black velvet and decorated with gilded rivet-heads. Many are lined with blue silk.

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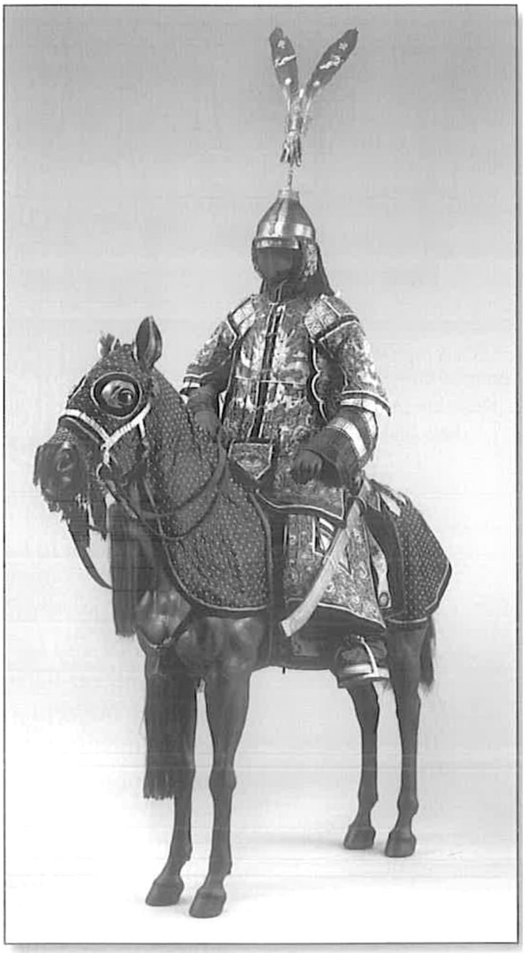
[28] Crossley, *Translucent Mirror*, pp.274–75, dismisses the vambrace-like sleeves, as well as the plate armour on the emperor's shoulders, as artistic license. She also dismisses the glinting steel on the emperor's helmet, yet shining metal was a standard feature on many imperial helmets, as were, for that matter, the vambrace-like sleeves of imperial suits of armour. Compare the Xianfeng emperor's suit of armour in Molen and Uitzinger, *Forbidden City*, p.234.

Ordinary bannermen wore ceremonial armour made of plain silk, not satin, in the colour of their banner, either without edging or, for those from the bordered banners, edging in the bordered colour of the banner (that is, red, except for the bordered red banner, which had white edging). Their armour was otherwise identical to ordinary battle armour. Several suits of ordinary bannerman ceremonial armour from 1765 remain in museums, including specimens from all banners. Their helmets are all of black lacquered leather, with black helmet tassels.[29]

The Imperial Guard, consisting of men recruited from all banners, wore white ceremonial armour with 'stone-blue' (*shiqing*, a deep blue-black colour) edging for those who served on foot and a similar stone-blue ceremonial armour for those who served on horseback. Both types were made of satin. Judging from preserved eighteenth-century samples, the stone-blue hue came close to black and is presently often identified as black.[30] Guardsmen wore black lacquered leather helmets with red tassels. Other units wore black tassels instead.[31]

A special case of embroidered brocade for the ivory archer's ring was used with ceremonial armour.[32]



Horse armour. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)

Horse Armour

Horse armour was apparently never used in the early Manchu campaigns, as no contemporary illustrations show it. Not even Nurgaci had it, according to contemporary prints. Later, when horse armour was adopted by the Manchu army, it was only used by some officers and perhaps certain armoured cavalry. It was then designed to imitate brigandine and known as '*ma ding jia*' (horse armour with nails). It was made of the same materials as regular armour, that is, mere padded silk or, at best, silk studded with gilded rivet-heads. Internal metal plates were apparently not used.

Judging from two preserved late eighteenth- or early nineteenth-century specimens in The Metropolitan Museum of Art, New York, Qing horse armour consisted of a hood for the head and the entire neck of the horse and a crupper for the hindquarters. A peytral (breast defence) was no doubt also used, although none seems to have been preserved. So were, from time to time, apparently also steel chamfrons for the horse's head. A net and fringe were suspended from the head piece over the lower part of the horse's face. As for colours, one preserved horse armour specimen is of padded stone-blue satin with velvet borders.[33] The Imperial Guard employed stone-blue ceremonial armour for those guardsmen who served on horseback, so this particular horse armour may have belonged to one of them.

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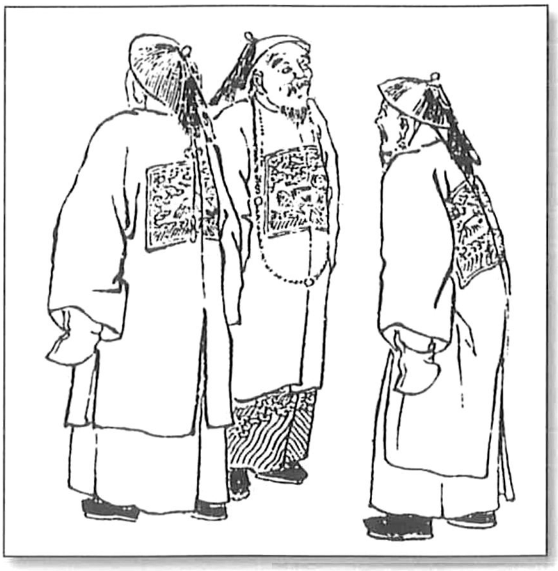
[29] See, for example, Molen and Uitzinger, *Forbidden City*, pp.242–43.

[30] See, for example, Stone, *Glossary*, p.55; other preserved samples in various collections.

[31] As illustrated in Molen and Uitzinger, *Forbidden City*, pp.240–43.

[32] Stone, *Glossary*, pp.14–17, which also includes illustrations of archer's rings.



Military mandarins, two in ordinary dress (*changfu*) and one, in the centre, in festive dress (*jifu*). (Anon.)

Officers' Uniforms

A military officer, regardless of rank, had to furnish a number of different suits of dress. This might include not only armour as well as ordinary uniforms but also – especially in the case of higher-level officers – official dress in various degrees of formality and perhaps even court dress.

In times of peace, ceremonial armour was worn by the emperor and high officials as a display of might and magnificence. On the field of battle, armour was also worn by many officers but more as a symbol of rank than in the hope of protecting the wearer. As mentioned above, some wore what looked like armour merely as a uniform, without any metal plates.

Origin of the Qing Dress Code

As early as in the 1590s, Nurgaci had enforced a strict uniformity among his followers, both in hairstyle and dress. Dress also depended on the season and the rank of the wearer. We have seen that a Korean envoy, Sin Jungil, visited Nurgaci in 1595/1596 and left an eyewitness report on the Manchu dress.[34]

Nurgaci and his generals, by then, all wore sable fur hats with a pointed crown and ear flaps in the Mongol fashion. The hat was topped by a feather and a small decoration. This style of hat was the immediate ancestor of the later Manchu winter hat, worn by all bannermen and regular soldiers. Even the use of a feather as a mark of distinction continued throughout the Qing period.

Nurgaci and his generals wore long robes, reaching to their feet, stitched with insignia in five colours. The lower length of the robe was, in Nurgaci's case, entirely of sable, richly embroidered at the border. His generals wore similar robes, with their ranks indicated by different stitching and degrees of sable appliqué. No doubt inspired by the official dress of Ming China, the use of embroidered badges to indicate rank began at Nurgaci's court and continued throughout Qing rule.

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[33] Robinson, *Oriental Armour*, pp.153–54; Stone, *Glossary*, p.99.

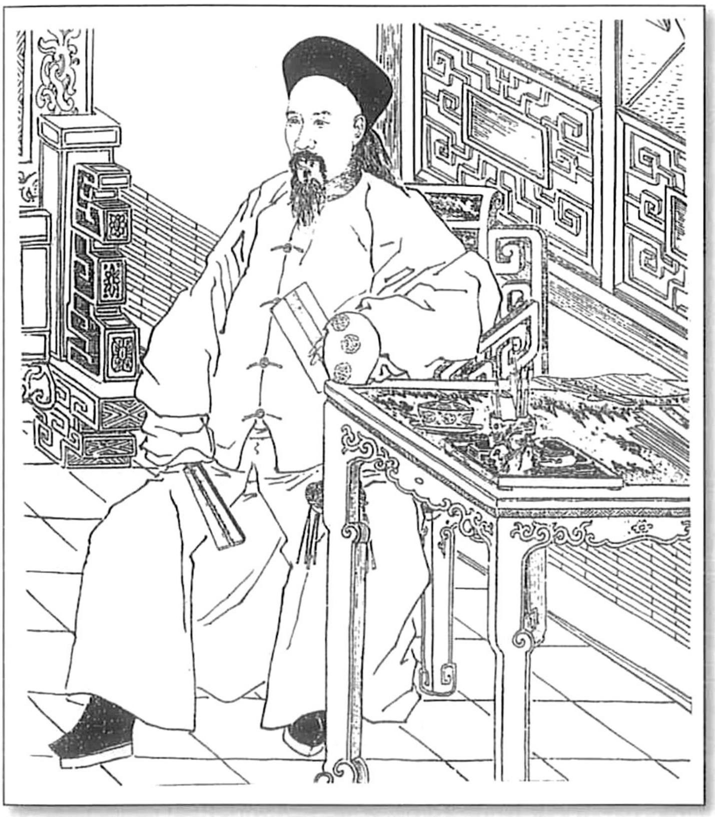
[34] Sin Jungil, cited in Crossley, *Manchus*, pp.57–58, on which this section is based.

As noted, Nurgaci's men spared a small patch of moustache on each side of the upper lip but plucked the rest. Some of his nobles were silver hoops in their ears.

The red tassel on the hat became a distinguishing mark of the Manchus early on. By 1628 at the very latest, and no doubt much earlier, the Manchus were even referred to as 'the Mongol nation with red-tasselled hats' by their Mongol allies.[35]

Manchu Daily Dress

In the field, Qing military officers wore daily dress that, although individually procured, was uniform in style and was expected to conform to certain standards. Daily dress came in a number of styles, each appropriate to rank. There were also what might be called 'ethnic differences', with Mongol officers in particular still dressing in customary Mongol garments. Manchu and Chinese officers wore identical garments when on duty.



Military officer in travel dress with winter hat. (Anon.)

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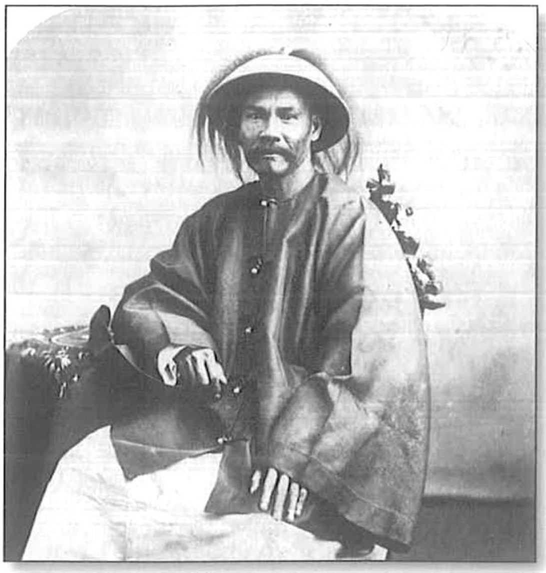
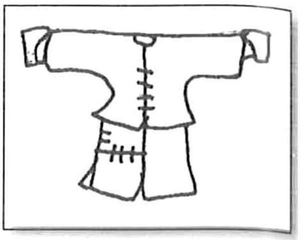
[35] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.96.



Zhan Laisun, superintendent of the Fuzhou Naval School, c. 1870, in travel dress with summer hat. (Anon.)



Dress consisting of *quejin* and *nei tao*. (Author's drawing)

So-called 'travel dress' (*xingfu*) was widely used by military officers, who generally treated it as both undress and field uniform. It was also invariably used by civil officials when travelling. Travel dress consisted of the horse jacket (*ma gua*) or riding jacket, used by most bannermen as a military uniform. As the characteristic garment of a military uniform, the horse jacket worn by junior officers was little different from that worn by the ranker.

The officer wore his horse jacket over the traditional Manchu upper-class *nei tao*: a plain, long silk robe with a right-hand closure, centre splits at front and back as well as in the sides, and long tapered sleeves with narrow horse-hoof cuffs, which could be turned back and the sleeves pushed up when on informal occasions. When used by military officers, this robe generally had a detachable section (*quejin*, 'cut away' overlap or fastening) buttoned onto the robe at the lower right front above the hem, which was unbuttoned and removed when mounted on horseback. This was originally a military style, later also used by some civil mandarins. The officer also wore a tight belt around the waist.

Junior officers appear to have worn horse jackets of the same colour as their men. Higher military mandarins wore jackets of different colour. The colour of the robe, to some extent, depended on the rank of the officer but was often blue. As the garment was fundamentally civilian, its colour was no more uniform than those of the undergarments worn by the troopers under the officer's command.

Imperial guardsmen close to the emperor were permitted to wear the prestigious 'bright yellow horse jacket' (*minghuang ma gua*).[36] Although referred to as 'bright yellow', contemporary illustrations would seem to indicate a paler variety of yellow. A pale yellow horse jacket therefore came to be awarded as a distinction of high merit. Imperial princes were not allowed the imperial yellow but wore red horse jackets with high collars, as did high officials of the first grade of rank. Second grade officials and those below wore a black garment, again with a collar. Castiglione's contemporary paintings show that not all imperial guardsmen wore the yellow jackets that were used as a mark of distinction. Those who did, which included those nearest to the emperor, wore pale yellow jackets with white or dark brown edging. A few had no edging. In Castiglione's paintings, all guardsmen wear the typical winter hat throughout the year.

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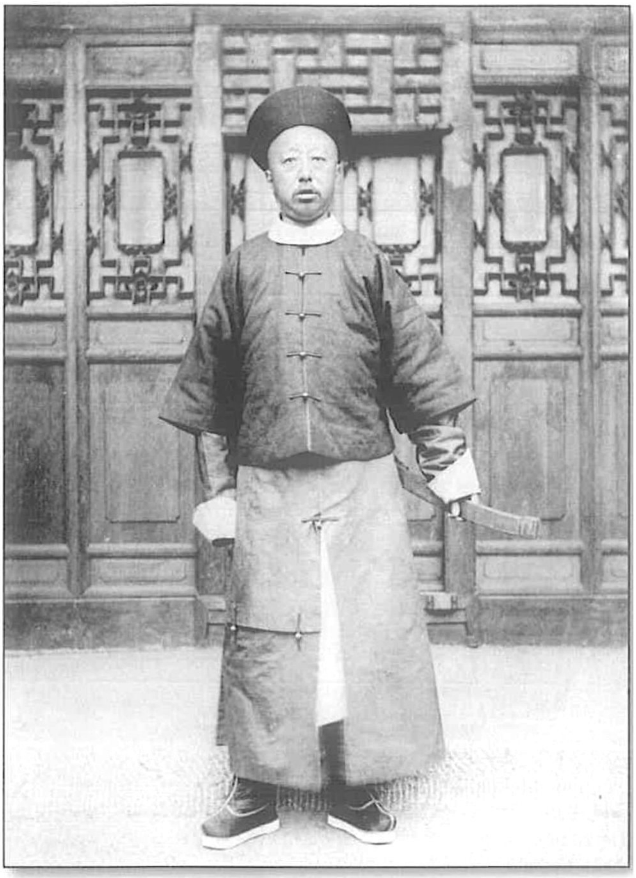
[36] Rawski, *Last Emperors*, p.82.

Travel dress also included the regular plain black knee-high satin boots (*ma xue*) with thick white soles, worn by all officers and bannermen. The white soles indicated that the wearer was an important man who never left home on foot. A proverb of the time states, 'A man in boots will not speak to a man in shoes'.[37] The boots were expensive, said to cost as much as a servant's wage for one year.[38]

On his head, the officer wore a hat of a type decided by the season (see 'Official and Ceremonial Dress' below). The winter hat was very similar to the hat worn by regular soldiers and guardsmen, only made of more expensive materials.



Yixuan, Prince Chun (1840–1891), dressed in *quejin*, *nei tao*, and winter hat, 1870s. Note the conventional manner of carrying the single-edged sword, with the hilt facing rearwards. (Liang Shitai)

Imperial Daily Dress

The early emperors, who remained active in war and hunting, wore practical dress not much different from their men. In Castiglione's contemporary paintings, the Qianlong emperor often wears a hunting dress consisting of a dark grey or black horse jacket and grey leggings. This dress was also worn while travelling. A handscroll, painted by the court artist Xu Yang to commemorate the Qianlong emperor's tour in 1751 through Hebei, Shandong, Jiangsu, and Zhejiang provinces, depicts the emperor as well as several members of his entourage.[39] The emperor wears a purplish black jacket above a purplish grey shirt. He wears standard beige baggy trousers and a typical Manchu winter hat.

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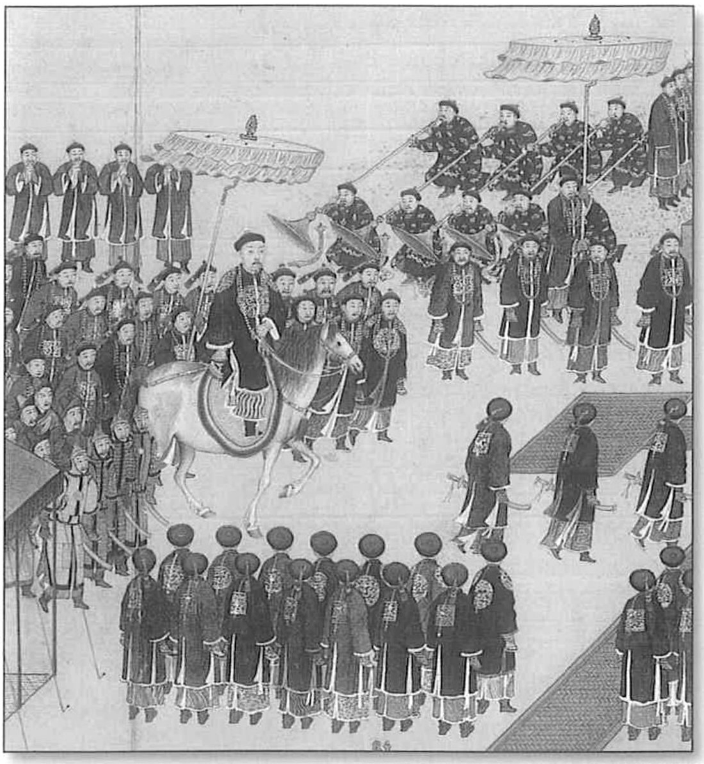
[37] Henry C. Sirr, *China and the Chinese* (London: W. S. Orr & Co., 1849), vol. 1, p.309.

[38] Wilson, *Chinese Dress*, p.29.

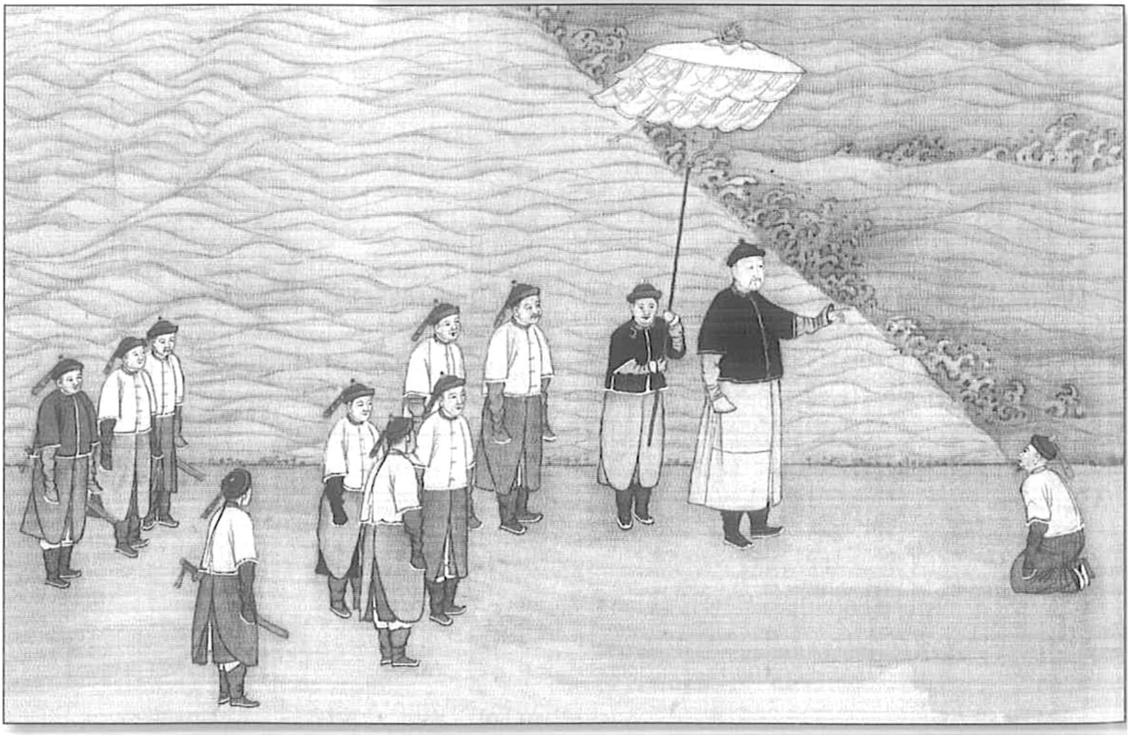
[39] The painting is reproduced in Patricia B. Ebrey, *The Cambridge Illustrated History of China* (Cambridge: Cambridge University Press, 1996), p.226.

An attendant to the emperor carries a pale yellow parasol on a red pole with a gilded metal finial. His purplish grey jacket is edged in white. His dress is otherwise the same as that of the imperial guardsmen. The parasol is the only mark of rank that really singles out the emperor.

The Qianlong emperor leading his triumphant soldiers in a salutation service outside the capital, accompanied by the long, deep wail of multiple Tibetan horns. (Jean-Damascène Sallusti)



The Qianlong emperor and imperial guardsmen in travel dress during the 1751 inspection tour of southern China. (Xu Yang)

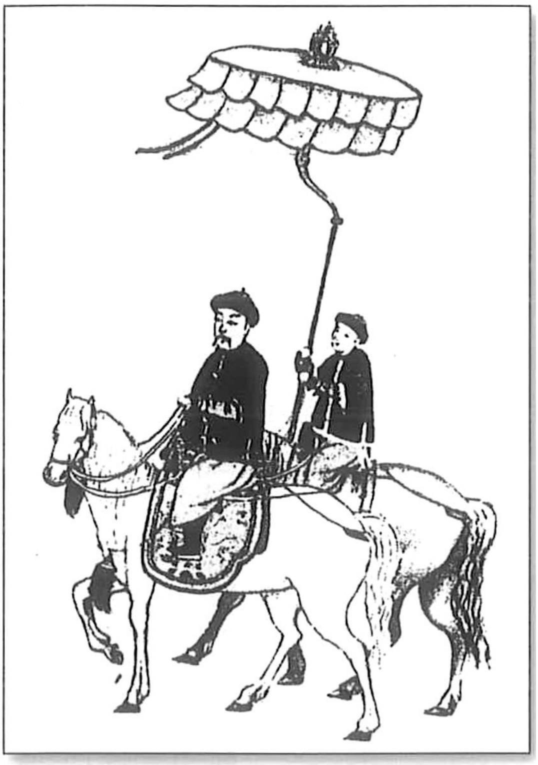


Mongol Daily Dress

Mongol traditional dress continued to be worn by Mongol officers and some Manchu nobles. A Mongol officer's dress was fundamentally identical to that of his men, only more lavish.

A 1760 portrait of the Manchu Brigadier Janggimboo, reprinted in the colour artwork section, shows the officer as a Mongol cavalryman dressed in a dark forest green quilted coat of the Mongol pattern, reaching well below the knees and held together with two gilded buttons.[40] Below the coat is a pale blue inner robe. He wears the standard soft boots, the upper part very dark grey and the lower black. The soles consist of two layers, the upper layer pale emerald green and the lower white.

In the portrait, Janggimboo wears the typical Manchu winter hat, from which is suspended a mark of distinction: a natural single-eyed peacock feather.



The Qianlong emperor during the 1751 inspection tour of southern China. (Xu Yang)

Official and Ceremonial Dress

Both military officers and civil officials were, on various occasions, expected to wear official dress. Official dress came in a number of styles, each appropriate to a certain occasion or level of formality. All details of official dress were strictly regulated. The first rules relating to Qing court dress were laid down as early as 1636 by Hung Taiji. The dress code was revised several times after the conquest of China, primarily by the Shunzhi emperor in 1652 and the Qianlong emperor in 1748 and 1772. The official, unless of very junior level, was expected to have at least one full dress of each style appropriate to his standing.

Military officers and civil officials employed fundamentally the same dress, although minor details differed between the two groups. Clothing was divided by official decree into official and non-official, then subdivided into informal, semi-formal, and formal. Variants existed for the different seasons, summer and winter.

Official dress was divided into three main types:

- *changfu* (ordinary dress) or informal dress
- *jifu* (festive dress) or semi-formal dress
- *chaofu* (court dress) or formal dress.

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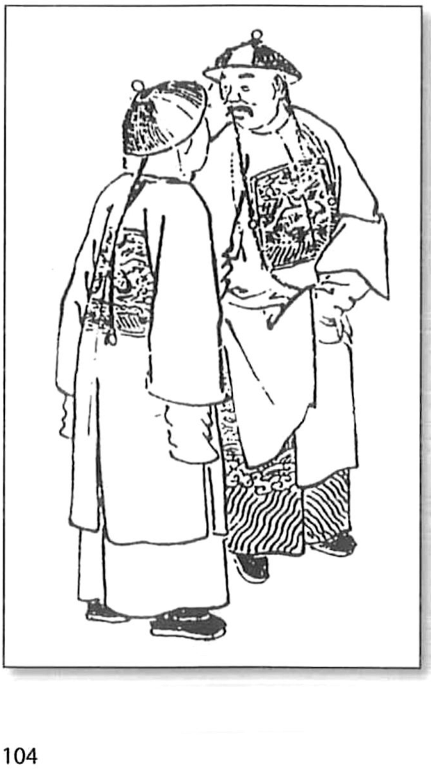
[40] The Metropolitan Museum of Art, Purchase, the Dillon Fund Gift, 1986 (1986.206).

Ordinary Dress (Informal Dress)

Ordinary dress (*changfu*) was the simplest type of official dress. It was generally worn by military officers and civil officials for all occasions unconnected with ceremonies and the exercise of government. It was also commonly worn by low-ranking officials on semi-formal occasions.

Ordinary dress often consisted of the plain, long silk *nei tao* robe used also as travel dress. The robe was commonly reddish brown, grey, or blue. High officials and nobles alternatively wore the highly decorated special garment of the same cut known as a 'dragon robe' (*longpao*, if wearer of imperial rank; *mangpao*, if worn by high officials). Some robes, and especially those used by military officers, had, as mentioned above, a detachable section that was removed when on horseback.

The robe was the significant part of the dress, but it was in no way as conspicuous as the calf-length, loose-fitting coat (*pufu*) customarily worn above it. This style of coat was mandatory on official occasions after 1759. The coat came in a single, sober dark colour, generally stone-blue, had slits at the rear to allow horseback riding and reached to the knees. It had a central front opening and was buttoned in the front with twisted silk cord buttons, four in number for officials of the first grade, and five for ranks below this. In addition, the coats worn by the highest officials sported various dragon patterns on chest, back, and shoulders. Lower officials had square silk panels or badges as insignia (*puzi*), about 0.3m square, sewn onto the coat on the front and back. For summer, the coat was made of silk gauze with no lining. For spring and autumn, it was made of silk or satin with cotton lining. For winter, it was frequently lined or edged with sable or white fur. Sable fur was reserved for officials of third grade and above. The coat was made of two lengths of cloth folded at the shoulders and opening down the centre-front, with side and back vents. This dress, too, was adapted for mounted use. Its three-quarter-length sleeves were narrow and made in a different material but allowed sufficient mobility to permit archery. Most sleeves were made of black, ribbed silk or black silk with gold.



Two mandarins wearing the *pufu*, one with ordinary and the other with festive dress. (Anon.)

The ornamental embroidered insignia on the coat, known as 'mandarin squares' in the West, gave the coat its name, '*pufu*' (garment with a patch). The use of such insignia was adopted in 1652 from the Ming, among whom they had denoted rank. The basic designs and symbolism were retained, but the Qing insignia were slightly smaller in size. They continued to indicate the rank of the wearer. Military rank was symbolised by animals, while civil ranks were symbolised by birds. Many auspicious attributes and cosmological symbols were also included in the design around the main motif. As the coat was buttoned in front, the front insignia were neatly divided in half.

Military officers and civil officials used different designs, depending on which of the nine grades of official rank (from the ninth grade, the lowest, to the first grade, the highest) the official held (see Table 4).

Mandarin Squares (*puzi*)

Mandarin Grade	Military Insignia	Civil Insignia
1st	Lion; from 1662 *qilin* (unicorn)	White crane
2nd	Lion	Golden pheasant
3rd	Tiger; from 1664 leopard	Peacock
4th	Leopard; from 1664 tiger	Wild goose
5th	Black bear	Silver pheasant
6th	Panther	Egret
7th	Panther; from 1759 rhinoceros	Mandarin duck
8th	Rhinoceros	Quail
9th	Sea horse	Paradise flycatcher

By the second half of the nineteenth century, a stiff collar or shoulder cape (*piling*) came into use as part of ordinary dress. This was purely a Manchu invention, until then only used with the formal court dress (more on which below). It was embroidered with dragons and lined with brocade on the inside.

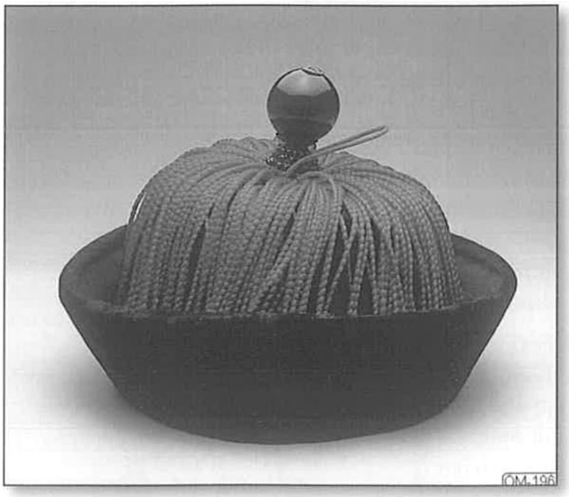
The mandarin also wore a tight belt or girdle (*chaodai*) of plain coloured silk around the waist. Originally coarsely woven in blue or stone-blue silk and tightly belted, it formed part of traditional Manchu dress. Under the Qing, the belt was dyed yellow for senior members of the imperial family and blue or stone-blue for others. The design and material of the ornamental belt buckle and three similarly designed plaques on the belt were selected according to the rank of the wearer (see Table 5). The side plaques had oval metal rings at the bottom, from which the essentials of daily life could be suspended, for instance, a purse or two, a fan case, a case for chopstick and knife, or an archer's thumb-ring.

Girdle Plaques (from 1645)

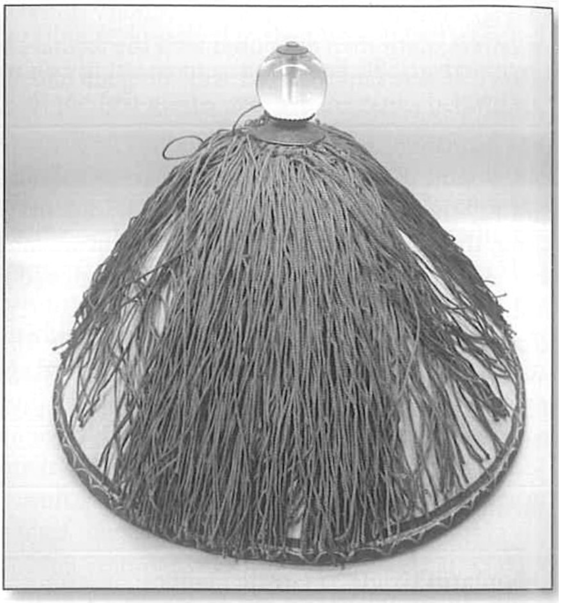
Mandarin Grade	Girdle Plaques
1st	Four rectangular jade plaques mounted in gold, each set with a ruby or red stone
2nd	Four circular engraved gold plaques, each set with a ruby or red stone
3rd	Four circular engraved gold plaques
4th	Four circular engraved gold plaques set in silver
5th	Four circular plain gold plaques set in silver
6th	Four circular tortoiseshell plaques set in gold
7th	Four circular silver plaques
8th	Four circular clear ram's horn plaques set in silver
9th	Four circular black horn plaques set in silver

Official dress of any kind included the plain black, knee-high satin boots (*ma xue*) with thick white soles.

The official also wore a hat, of a type appropriate to the season and his rank. Hats came in two seasonal varieties, used for summer and winter, respectively. The winter variety (which as we have seen formed the pattern for the regular soldier's hat) had an upturned brim of sable, black fox, mink, sealskin, satin, or velvet, depending on the wearer's rank, and a slightly conical, padded crown covered in strands of silk for ordinary and festive dress or thick crimson silk floss fringing in case of the court hat, radiating from the apex of the hat. The summer hat was conical in shape, without a brim, made of woven straw for the lower ranks and finely woven split bamboo or rattan covered with silk gauze and edged with a narrow band of brocade for the higher. Strands of red silk cord or dyed horse or goat hair covered the crown from apex to edge. Various types of officials wore different insignia at the crown of the hat. Military officers wore a trident, commonly of gilded bronze.



Winter hat for festive dress (*jiguan*), decorated with a round 'mandarin button' of the type introduced in 1727, which in this case denotes a mandarin of the fourth grade. (Museum of Far Eastern Antiquities, Stockholm)



Summer hat. (Anon.)

Festive Dress (Semi-Formal Dress)

Festive dress (*jifu*) was a semi-formal dress used for less important court occasions and general official business. It was colloquially known as 'full dress'. It consisted first and foremost of the long dragon robe (*longpao* or *mangpao*), an embroidered robe with slits in front, back and sides, and sleeves with horse-hoof cuffs. The dragon robe was known as a '*longpao*' if the robe's dragons were depicted with five claws, which was reserved for members of the imperial family. A dragon robe that depicted dragons with only four claws was called a '*mangpao*'.

Robe colours were carefully controlled. Bright yellow, representing central authority, was reserved for the emperor. Only the imperial family and certain men of distinction so endowed by the emperor were, from the earliest times, allowed to wear certain tones of yellow. 'Apricot yellow' (*xinghuang*) was reserved for the heir apparent. 'Golden yellow' (*jinhuang*), actually orange, was worn by the emperor's sons. Imperial princes and nobles wore blue or brown, unless they had been given the honour of wearing golden yellow by the emperor. Certain colours were also worn by the emperor for different ceremonies. The five colours black, white, yellow, red, and green represented the five elements water, metal, earth, fire, and wood. Yellow, the central colour, represented earth, the centre of the universe dominated by the emperor as the source of all power and blessing.

Military officers and civil officials wore robes of different colour. First- and second-grade military officers wore stone-blue. Lower officials wore plain blue robes. Blue was the Qing dynastic colour, easily distinguished from the bright red of the Ming.

The dragon robe was worn below the dark coat with mandarin insignia (*pufu*). Below the knees, where it remained visible, this particular dragon robe was decorated with a pattern of 'standing waves' (*lishui*), diagonal lines that ended in waves at the top. In front and rear, as well as on the sides, the symbolic world mountain rose from the waves.

This dress was worn with a hat of a special design for festive dress (*jiguan*) and decorated with a round button, known as 'mandarin button' in the West, in a colour and material appropriate to the official's rank (see Table 6). There were two seasonal varieties. The mandarin also wore a tight belt around the waist, of the same type as was used in ordinary dress.

Festive Dress Hat (*jiguan*) Insignia[41]

Mandarin Grade	**Button**
1st	Red coral or opaque red glass
2nd	Red coral or opaque red glass engraved with the character '*shou*'
3rd	Red coral; from 1730 blue sapphire or clear blue glass
4th	Opaque blue glass or lapis lazuli
5th	Lapiz lazuli; from 1730 clear rock crystal or clear glass
6th	Rock crystal; from 1730 opal or opaque white glass
7th	Gold or gilded
8th	Gold or gilt engraved with the character '*shou*'
9th	Gold; silver 1730–1800; then gold or gilt embossed with the character '*shou*'

The stiff collar or shoulder cape (*piling*) eventually also came into use with the semi-formal dress. Officials of high rank moreover wore over the coat a necklace of 'court pearls' (*chaozhu*), known in the West as a 'mandarin

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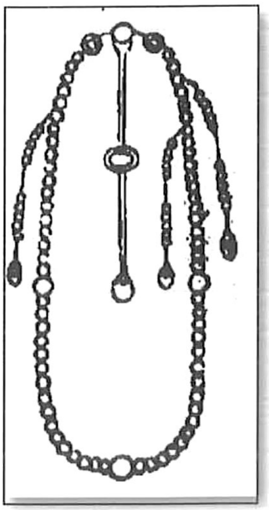
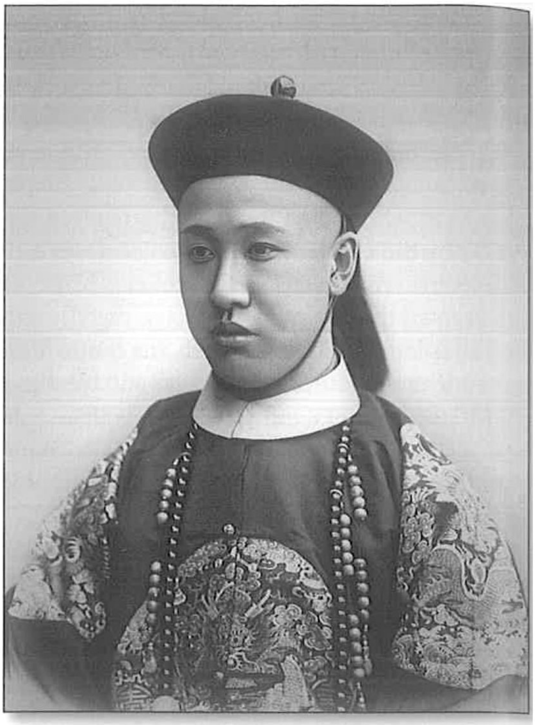
[41] Festive dress hat insignia were introduced only in 1727.



Necklace of 'court pearls' (*chaozhu*), known in the West as a 'mandarin chain'. (Okada Gyokuzan, *Morokoshi meishō zue* 3, 1806, from Chinese original)

chain'. This custom was of Buddhist origin, inspired by the Buddhist rosary. The necklace consisted of 108 small semi-precious beads with four large beads of contrasting stone, placed between groups of 27 beads. The necklace had four pendant strings attached to it, three falling to the front and the longest one down the back. It was worn by military officers of the fourth grade and above and civil officials of the fifth grade and above, either on top of or beneath the collar (*piling*). Any semi-precious stones except pearls could be used. Lower officials sometimes even made do with wood or glass.



Photograph of a youthful Zaifeng (1883–1951), second Prince Chun, in festive dress with court pearls. (Anon.)

Festive dress also included the plain black knee-high satin boots (*ma xue*) with thick white soles.

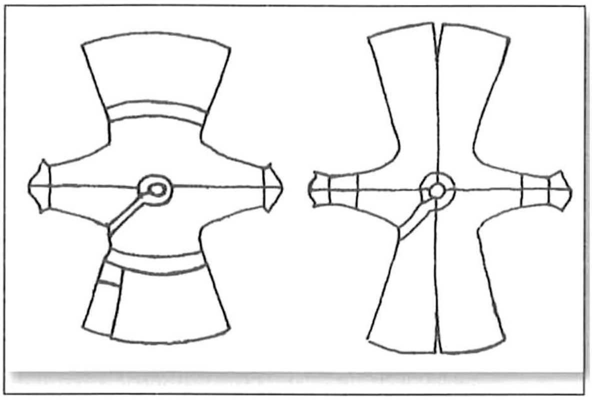
Court Dress (Formal Dress)

Court dress (*chaofu*) was the most formal style of dress, worn only by the imperial family, high-ranking nobles, and at court. Although of little use within the military, except when in attendance of members of the imperial family, it formed the elaborate foundation on which all simpler types of officers' dress were formed. Court dress was only used when attending major ceremonies at the imperial court. A military officer wore his sword with court dress. However, most lower-level officials never acquired the costly court dress.

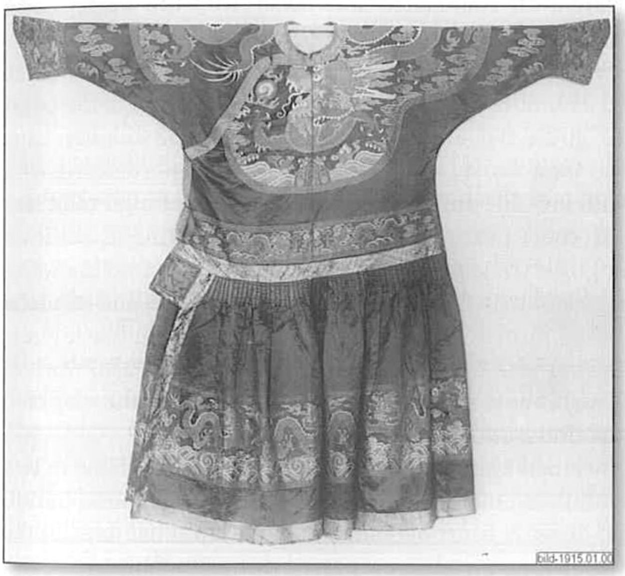
The decoration and shape of the garments used as court dress depended on an elaborate system of symbolism. Specified motifs varied in style, placing, and quantity according to the wearer's rank. Different colours were prescribed for certain garments. The most important motif was, of course, the dragon, reserved for those of high rank.

Court dress consisted of a splendid long, heavily embroidered, dragon-patterned court robe (*chaopao*) buttoned on the side. The court robe should not be confused with the already-mentioned dragon robe (*longpao* or *mangpao*), also embroidered with dragon designs but used on less formal occasions.

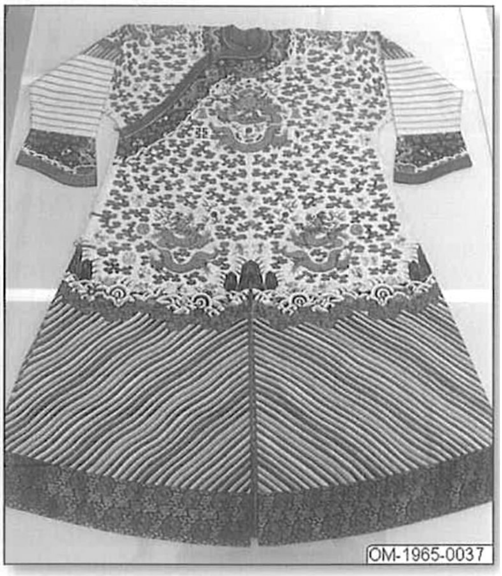
The court robe, a modified continuation of the style worn by the Ming, was a long garment reaching to the feet. It consisted of a short side-fastening jacket, joined to a skirt formed by a pair of pleated aprons, with slits at either side. On the right side of the robe was a small square of bordered material (*ren*) attached at waist-level, which served no practical purpose. The robe had normal Manchu horse-hoof cuffs. The decorative pattern on the robe was confined to a four-lobed yoke of circular dragon medallions that extended over the chest, back, and shoulders, and a band around the bottom part of the skirt. In comparison, the dragon robe, although resembling the court robe, differed fundamentally in cut, having slits in the front, back, and sides, even though it, too, had horse-hoof cuffs like the court robe and indeed the *nei tao* robe. The wearing of the court robe was restricted to members of the imperial family, princes, nobles, dukes, and high-ranking officials at court.



Court robes and dragon robes looked superficially similar but were cut differently. Left: Court robe. Right: Dragon robe. Both are drawn to show both front and rear. (Author's drawing)



Dragon-patterned court robe (*chaopao*). Members of the imperial family wore robes with dragons depicted with five claws. Since the dragon in the present robe has four claws, it was used by an official unrelated to the imperial family. (National Museum of Ethnography, Stockholm)



Dragon robe (*mangpao*). A dragon robe was called a *'mangpao'* if the robe's dragons were depicted with only four claws. A robe whose dragons were depicted with five claws, which was reserved for members of the imperial family, was known as a *'longpao'*. (Museum of Far Eastern Antiquities, Stockholm)

Summer robes were either made of gauze or lined with silk, the latter worn during late spring and early autumn. Winter robes were trimmed with fur or even covered with sable fur.

Colours were the same as for the festive dress dragon robe. First- and second-grade military officers, as well as first-grade imperial guardsmen, wore a stone-blue court robe. Lower-ranking officials and imperial guardsmen wore different types of court robes. Mandarins of fifth to seventh grade wore plain blue silk damask court robes with gold and black brocade edging. The eighth and ninth grades wore plain blue court robes, with a conventional cloud pattern in place of dragon motifs.

The court robe was worn below the shorter, loose *pufu* coat. The coat hid the most decorated parts of the robe, but, as the coat reached only mid-calf, the wearer had the opportunity to display the embroidered hem of the court robe below the knees underneath. In addition, the coats worn by the highest officials sported various dragon patterns on chest, back, and shoulders. Lower officials instead had the regular mandarin square badges (*puzi*) sewn onto the coat on the front and back.

The emperor did not use a *pufu* but a very similar coat called '*gunfu*', which became part of official court dress from 1759. It appears to have been slightly shorter in length with a slight cut away on the sleeves but was otherwise identical. It was decorated with circular embroidered dragon medallions instead of the mandarin squares. Lower-ranking princes and nobles wore the same coat but with squares.

In winter, the imperial family, imperial guardsmen, and the first three grades of officials wore a fur coat called '*duanzhao*' with the winter court robe. On these, no insignia were worn.

The court robe was worn over a second robe of thinner silk material. Court dress included a number of separate garments in addition to the court robe: collar, necklace, girdle, hat, and boots. The stiff collar or shoulder cape (*piling*) was, as mentioned above, a Manchu invention, embroidered with dragons and lined with brocade on the lower side. Officials of high rank also wore the necklace of 'court pearls' (*chaozhu*). The mandarins in addition wore the tight belt or girdle (*chaodai*) of plain coloured silk around the waist, with colour and design and material of the ornamental plaques and its metal rings on it an additional form of rank identification. The plain black knee-high satin boots (*ma xue*) with thick white soles were naturally also worn as part of court dress. Such boots were worn by all ranks below the emperor. Boots used with court dress, unlike others, were square toed.

The court dress included a special court hat (*chaoguan*), available in two seasonal varieties, with lavish insignia different from the mere round button used for semi-formal dress. A court hat had a pointed cap finial fixed to the apex of the crown with a long metal screw passed through a hole in the hat, an ornamental support base with a small setting of transparent stone or glass, a globular button, then, above that, an elaborate ornament that contained a semi-precious stone or jewel of the appropriate colour (see Table 7).

The colours of the jewels were based on the Manchu banners (red, blue, yellow, and white), as laid down in 1636 when the Manchu court in Mukden split the military officers and civil officials into four ranks. The settings were introduced with the assumption of the Ming system of nine grades after the conquest of China.

Court Hat (*chaoguan*) Insignia

Mandarin Grade	Jewel	Setting
1st	Red ruby	Pearl
2nd	Red ruby; from 1730 red coral	Red
3rd	Red ruby; from 1730 blue sapphire	Blue
4th	Blue sapphire	Blue; from 1730 lapis lazuli
5th	Clear white rock crystal	Blue
6th	Rock crystal; from 1730 white jade	Nil; from 1730 rock crystal
7th	Plain gold; chased 1645–1730	Nil; from 1730 rock crystal
8th	Gold; from 1645 chased	Nil
9th	Nil; from 1645 chased silver	Nil

Non-Official Dress

Non-official clothing was worn when at leisure. In addition, there were several styles of dress known as 'rain wear', that is, dress for outdoor use. These, like the 'travel dress' described above, were centred on the horse jacket.

Being the dress of leisure, non-official dress was worn by officers at home but generally not while in any position of command. It was accordingly seldom seen in a military context. In similarity to official dress, non-official clothing was subdivided into three categories, although the differences were not as strictly regulated as was the official dress. Non-official formal dress was, in practice, the same as official semi-formal clothing.

Non-official semi-formal and informal dress were both called 'half-dress'. This dress was fundamentally the same but simpler, with the robe often replaced by a plain white one for everyday use. The *pufu* was worn but without the badges of rank and was accordingly called a '*waitao*' (outer covering). In one of Castiglione's paintings, a Qing official appears to wear a brownish grey *waitao* even at an official reception for the emperor! It accordingly seems that the Qing dress code was more relaxed in practice than in theory, at least under the early emperors.

4

Weapons

Personal Weapons

Bannermen received arms and armour from the state. The Board of Works was responsible for the production of all military equipment, which then was distributed by the Board of War. Following the conquest of China, an identical procurement system was set for Green Standards soldiers. The Green Standards continued to receive their weapons from the state for the duration of the empire. Regulations were drawn up regarding schedules of maintenance, repair, and replacement of military equipment. One of them was the *Qinding junqi zeli* ('Regulations and Precedents on Military Equipment'), issued in 1792. Among other details, the regulations ruled that a standard sword was expected to last 40 years before its replacement.

However, by then, regulations for bannermen had already changed, and, from 1758 onwards, the state instead paid most bannermen an allowance in silver for the individual purchase and maintenance of military equipment.

Despite the regulations, the armament of Qing soldiers was far from uniform. Regulations, at times, required that each man had a bow, matchlock musket, spear, two swords, and shield. The majority, however, had no more than a sword and a spear or polearm. Bannermen, especially when serving as cavalry in the first half of the period, invariably had at least a bow, sword, and spear, as well as frequently a matchlock musket (carried on the back or, perhaps more commonly, between the saddle and the horse, under one's leg). The matchlock could be fired from horseback while at full gallop, in a similar way to the bow. Light and heavy cavalry used the same types of weaponry, although every armoured cavalryman carried a spear.

Most infantry were armed with bows, crossbows, swords, and a huge variety of polearms. Over time, an increasing number carried firearms, generally matchlock muskets. Certain soldiers, in particular the tiger men but also some other skirmishers, carried large, roundish shields.

It was not uncommon to have various weapons within a unit, and even matchlocks might be mixed in with spears and polearms. As for militia units and local forces, weapons often included a mixture of long spears, polearms, halberds with crescent-shaped blades, broad single-edged or narrow double-edged swords, bows, matchlock muskets, and even jingals (heavy muskets). It should be noted that many of these weapons, in particular the polearms, halberds, and some types of broad swords, were in fact regarded as archaic (and accordingly favoured by the very few martial artists China still boasted) and not generally used by line troops, even though they are frequently depicted in contemporary popular illustrations. Outside the banner units, weapons were often poorly maintained and frequently rusty, especially late in the period.

Bows and Crossbows

Manchu bow. (Anon.)

Competent archers generally came from the northern provinces of the empire. Most cavalry were mounted archers, although many bannermen also carried a matchlock.

The bow was a composite weapon of wood and horn. In southern China, a different model of bamboo and wood was instead used, as the climate was unsuitable for the regular composite bow. A bow of good quality was characterised by its colours, with a body of generally red or brown colour, horns greenish white, and glue of vermilion colour, waved or streaked.[1] The 1760 depiction of the Manchu Brigadier Janggimboo shows his bow with greyish finials, white ears, and otherwise of speckled greyish and earth brown colour. The inner side (belly) is black, while the string is white. The grip is hardly visible. Bows preserved in various collections have backs painted red, yellow, or green.

From 1667 onwards, each banner was responsible for manufacturing its own bows and arrows, while the emperor's bows and arrows were made by the Imperial Armoury (*Wubeiyuan*), which formed part of the Imperial Household Department (Manchu: *Dorgi baita be kadalara yamun*; Chinese: *Neiwufu*). The raw materials were brought from the north-east to ensure quality. Military bows were made of several sizes, categorised according to the draw weight, or degree of force necessary to draw the bow for shooting and thereby the force with which the arrow would be released. In Chinese-language regulations, the draw weight is measured in *jin* (often translated as pounds, although one *jin* equals 0.6kg, which is more than one pound).[2] The archery regulations of the Qianlong emperor of 1760 decree that a military bow for use on horseback should have a draw weight of no less than 30 *jin* (18kg). Military bows for use on foot should have a draw weight of at least 50 *jin* (30kg). There were also bows of greater draw weight. A Jesuit, Jean Joseph Marie Amiot, a few years after these regulations

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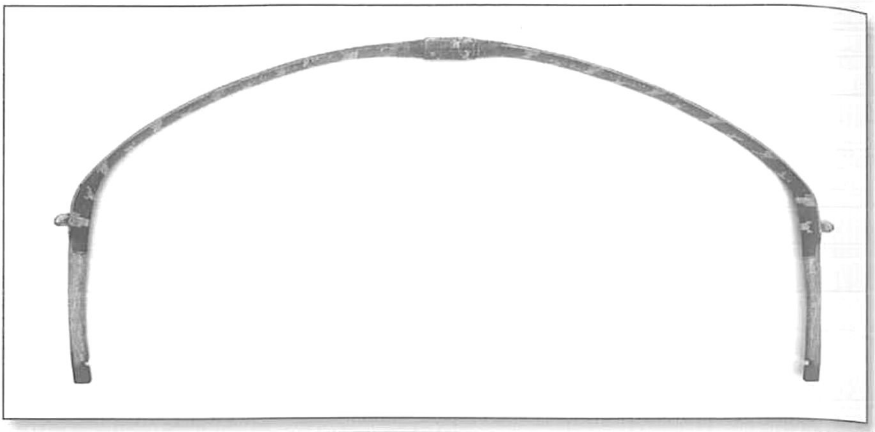
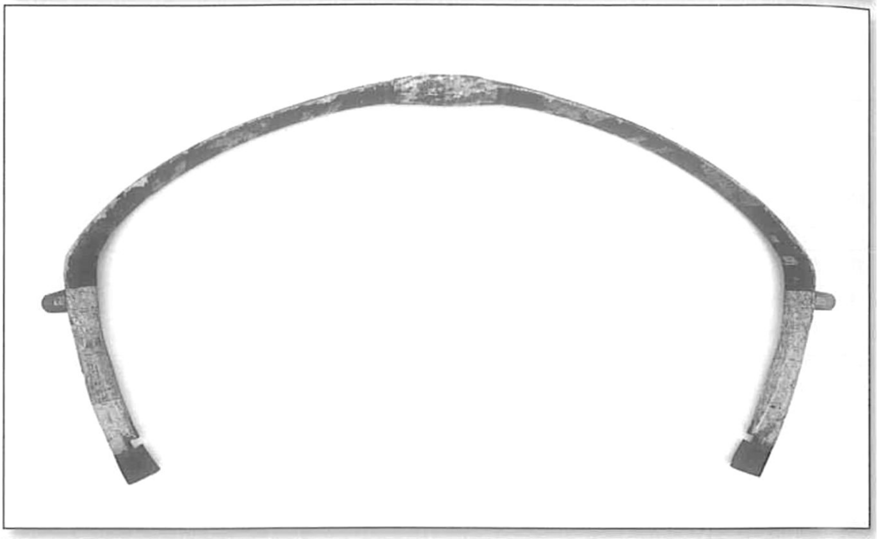
[1] E. T. C. Werner, *Chinese Weapons* (Shanghai: Royal Asiatic Society North China Branch, 1932), p.46. On Chinese archery and bows, see also Joseph Needham et al., *Science and Civilisation in China: Military Technology: Missiles and Sieges* (Cambridge: Cambridge University Press, 1994), vol. 5, part 6, pp.101–20.

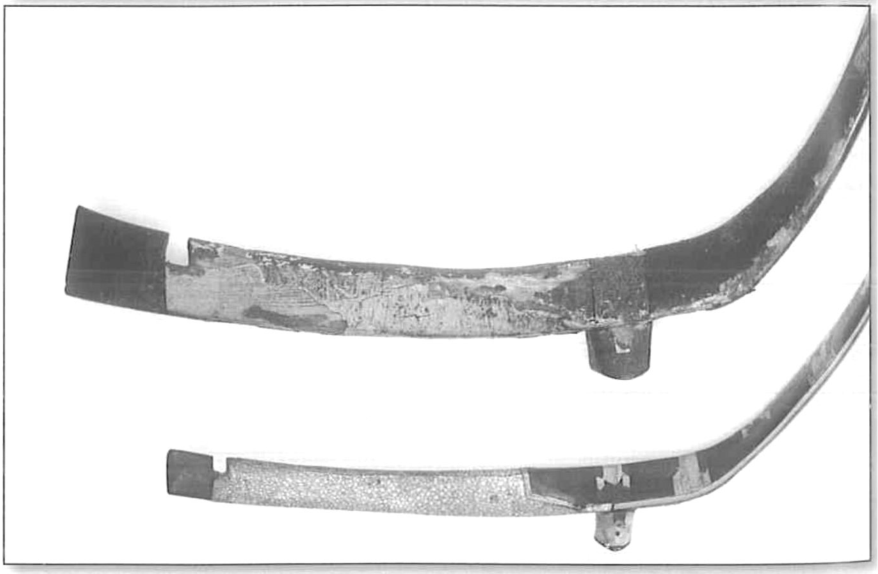
[2] Manchus instead measured draw weight in *li*, with 10 *jin* corresponding to one *li*.



Standard Manchu military bow in unstrung state. (Peter Dekker, Mandarin Mansion)



Known as '*wukegong*' (martial test bow), this was a heavy bow used to build up and test the archer's strength. (Peter Dekker, Mandarin Mansion)



Comparison of the tips of the two bows. (Peter Dekker, Mandarin Mansion) were adopted, noted bows of 70-, 80-, 90-, and 100-*jin*'s draw weight (42, 48, 54, and 60kg), of which those of 100 *jin* were made for exceptional archers and archery displays only. He believed that the others were for military use. A century later, another Jesuit, Etienne Zi, reported bows of 80-, 100-, and 120-*jin*'s draw weight (48, 60, and 70kg) but noted that these were only used for the military examinations and displays. For trials of strength in archery displays, the bows of the lowest grade, made for ordinary bannermen, had a draw weight of 80 *jin* while those made for imperial princes and the emperor were supposed to have a draw weight of as much as 180 *jin*. A complete set of eight test bows, held at the Field Museum in Chicago, range from 40 to 120 *jin*. Different types of wood were used for different qualities and types of bows, for instance, for war, hunting, and archery contests and displays. The emperor's bows were made of mulberry wood, while the bows of princes were made of birch, and those of banner officers were made of elm.[3]

A typical Manchu bow was about 1.59–1.65m long, although some could reach 1.78m and 1.81m, respectively; the smaller ones were designed for archery from horseback, while the larger ones were used on foot. The smaller type would weigh about 0.47kg while the two larger would weigh 0.65kg and 1.0kg, respectively. The bowstring was stiff, made of a bundle of threads tightly wound with thread, and more than one centimetre thick. Arrows were distinguished by length and type of point into 27 types. They were made of poplar, willow, and birch wood. Most arrows were from 0.8m to about 1.0m long and slightly more than one centimetre in diameter, with heavy socketed steel heads. Whistling arrows, that is, arrows with large hollow heads with openings in the front and sides through which air rushed when in flight to make a whistling noise, could be even longer, perhaps 1.25m long, with heads up to 10cm in diameter and 15cm long. Whistling arrows came in various materials, such as wood, iron, and bone. Some even had iron points. Whistling arrows were used for signalling.[4]

The archer used a thumb-ring worn on the thumb of the right hand for pulling the string of the bow. The thumb was passed around the string and under the forefinger, the base of the finger pressing against the arrow. The string was drawn up to the right ear of the archer, with the arrow set on the right-hand side of the bow. The thumb-ring was often of ivory or, in the case of officers, of jade.[5] Thumb-rings had long been used in China, but the Manchus seem to have introduced the cylindrical type of thumb-ring, which henceforth became the standard type.[6]

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[3] Jean Joseph Marie Amiot [Amyôt; 1718–1793] (trans.), *Art militaire des Chinois* (Paris: Didot, 1772), p.387; Stone, *Glossary*, p.134; Rawski, *Last Emperors*, p.43; P. Lorain, 'L'arc de guerre chinois', *Gazette des armes*, 87 (November 1980), pp.14–15, citing Père Etienne Zi, *Pratique des examens militaires en Chine* (Changhai [Shanghai]: Mission catholique, 1896); Needham et al., *Science and Civilisation*, vol. 5, part 6, p.102.

[4] Lamprey, 'Economy', p.427. For additional illustrations of arrows, see Stone, *Glossary*, p.73. See also Lorain, 'L'arc de guerre', p.14.

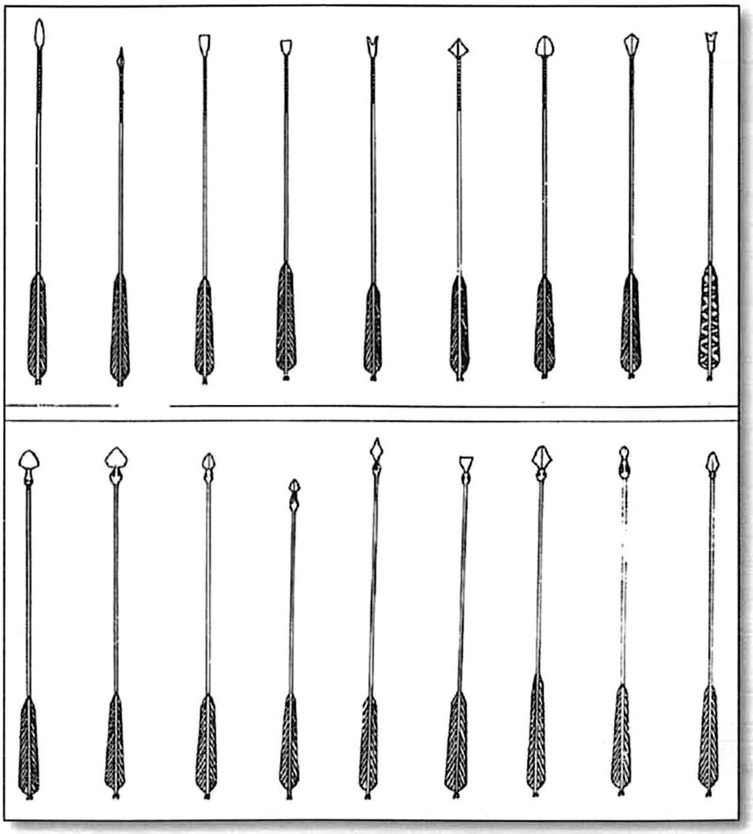
[5] Werner, *Chinese Weapons*, p.58; Stone, *Glossary*, p.135.

[6] Needham et al., *Science and Civilisation*, vol. 5, part 6, p.118.

A hunting bow owned by the Qianlong emperor, preserved in the Palace Museum, Peking, is 1.62m long, with 93.5cm-long arrows.[7]

The Manchu followed the pattern established among mounted nomads ages earlier of carrying his bow in a bow case hung from the left side of his belt and his arrows in a quiver hung from the right side of the belt. The bow case was in the shape of half a strung bow. The bow was put into it already strung, half of it extending out. The quiver contained from 27 to 60 arrows of three different types. The portrait of the Qianlong emperor in full ceremonial armour reviewing his troops shows a crimson red quiver. His arrows have white shafts, painted red at the wing section, with feathers looking like pheasant or eagle.

The 1760 portrait of the Manchu Brigadier Janggimboo depicts his bow case as black, with pale emerald decorations of the same hue as his scabbard. The lowest part, actually the bottom, is deep blue. From the bow case hangs a yellow metal ring, from which a pale brown or grey leather strap is suspended. The lower part of this strap is decorated with a tricolour white-deep-blue-white band. The quiver is only partly visible. It has black sides and bottom, with a gilded metal rim at the lower end and some pale emerald



Manchu arrows. (Anon.)

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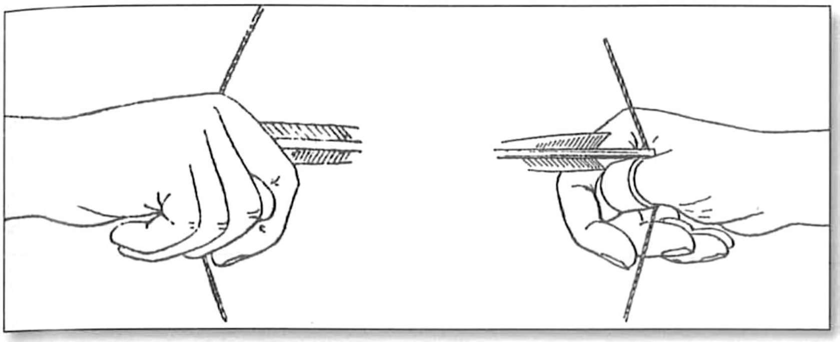
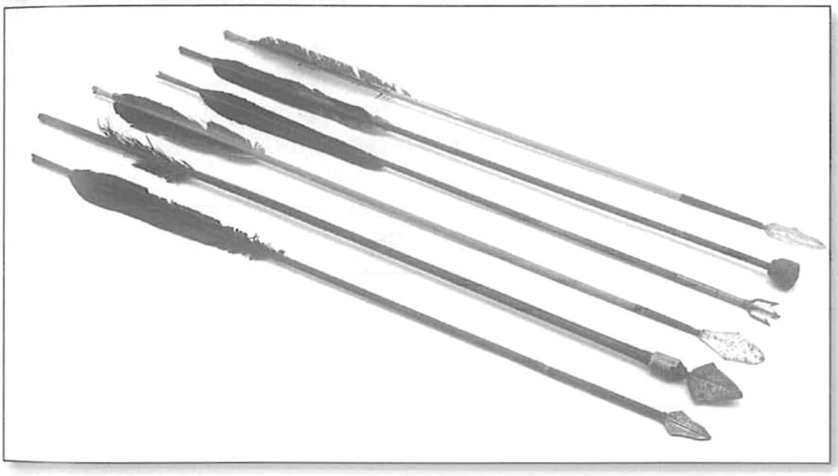
[7] Molen and Uitzinger, *Forbidden City*, pp.238–39.

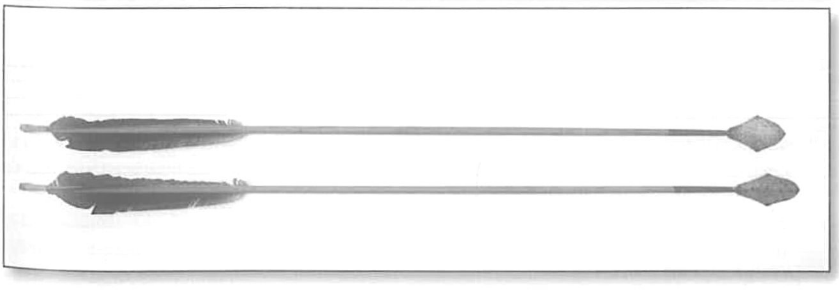
green decorations similar to the bow case. The arrows are of two types: some with black wings, red shafts (at the wing section), and emerald green ends and others with similar brownish white natural feather wings as the emperor, white shafts, shafts painted red at the wing section, and again with emerald green ends. Many quivers used with full dress were highly decorated in, for instance, red and white with gilded sides.

The original Manchu were horse archers, and the bannermen continued to fight in this manner long after the conquest of China. How did they use their bows? Armchair academics have often made unfounded assumptions about the range and efficiency of nomad horse archers, which do not need to be perpetuated here. Let us instead turn to contemporary and near-contemporary observers.



Pulling the string in the so-called 'Mongolian release', used by Manchus. (Edward S. Morse)





Manchu arrows. (Peter Dekker, Mandarin Mansion)

In the fourteenth century, the Egyptian Mamluks were expected to hit a circle somewhat less than one metre in diameter at a range of 60 bow lengths (60m).[8] A sixteenth-century Arabic treatise on archery points out that, while the extreme range for accurate fire is only 45 bow lengths, the range for effective (in penetrative power), although frequently inaccurate, fire is more than twice this.[9] In the early 1630s, the French officer Guillaume Le Vasseur de Beauplan travelled across the Ukrainian steppe. There, he was attacked by Crimean Tatars, whose military system was not unlike that of the contemporary Mongols and Manchus. Beauplan reported that the Tatars could shoot accurately up to 60 or 100 paces (by which he most likely meant about 50–90m). He also made the following observation, which appears to have been equally valid for those Manchu horsemen who, within a few decades, would clash with Russian cossacks in the Far East:

> I have encountered them many times in the country to the number of a good 500 Tatars who wished to attack us in our tabor [wagon fort], and even though I was accompanied by only 50 or 60 cossacks, they could do nothing to us nor could we best them because they would not approach within the range of our weapons; but after making numerous feints to attack us and trouble us with clouds of arrows on the head because they shot in arcade easily at twice the range of our weapons, they retired ...[10]

Shooting in arcade is to shoot at a steep angle, of about 45 degrees, to extend the range as far as possible. The result is that the arrows drop almost vertically on the target, as Beauplan indeed makes clear. Such shooting is of course very inaccurate; however, a massed enemy of the type the horse archers often confronted is very vulnerable to such archery. We can accordingly assume that the range for effective (in penetrative power) but inaccurate fire was significantly longer than the range for accurate fire.

Early twentieth-century observers concluded that Chinese and Manchu bows had a maximum range of 225–235m (which they noted as less than the Turkish bow due to the use of heavier arrows). This seems slightly high but otherwise reasonable for inaccurate fire that nonetheless carried some penetrative power and would seem to confirm that Qing archery was used in much the same way as among Tatars and Mamluks. In addition, the longer and thus heavier Qing arrow would seem to make the weapon yet more effective in penetrative power with regard to aimed fire at close ranges.[11]

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[8] J. D. Latham and W. F. Paterson, *Saracen Archery: An English Version and Exposition of a Mameluke Work on Archery (ca. A.D. 1368)* (London: Holland Press, 1970), p.138. While the translators interpret 60 bow lengths as about 75m, which would necessitate a bow length of 1.25m, elsewhere, the Mamluk bow is recommended to be of the same length as the arrow and correspond to the length that the archer is able to draw, which suggests a bow length of roughly one metre.

[9] Nabih Amin Faris and Robert P. Elmer (trans), *Arab Archery, An Arabic Manuscript of About A.D. 1500: A Book on the Excellence of the Bow and Arrow and the Description Thereof* (Princeton: Princeton University Press, 1945). The translators interpret 45 bow lengths as about 75m, which, for reasons mentioned, seems excessive.

[10] Guillaume Le Vasseur, Chevalier de Beauplan, *Description de l'Ukranie depuis les confins de la Moscovie jusqu'aux limites de la Transylvanie* (Paris: J. Techener, 1861), pp.95–96.

Many bannermen were expert marksmen with the bow. The Kangxi emperor was an accomplished archer, justly proud of the fact that he could draw and shoot the bow with either hand, on foot or on horseback, and only seldom missed the target even when mounted on a galloping horse.[12] The mounted archer was also trained to engage the enemy at close range. Exercises were held in which the mounted archers were supposed to hit their targets at a range of about 10m while galloping at full speed and repeat this without slowing down four times in a row, with each target being situated about 45m from the next.[13] Archery on foot entailed shooting at targets at a range, fixed in 1760, of 46m. At least two out of six arrows would have to hit the target to pass. Earlier, longer ranges were used: 77m from 1693 to 1760 and 123m before 1693.[14]

The Qing army, to some extent, also employed crossbows. These were magazine-fitted repeating crossbows, capable of firing eight to 12, or in one variant even 20, bamboo bolts in rapid succession. Such crossbows are illustrated as early as in the *Wubeizhi* (variously translated as 'Treatise of Armament Technology', 'Treatise of Military Preparedness', or 'Records of Armament') by Mao Yuanyi of 1621 but remained in use into the twentieth century. The bolts were loaded on top of each other in a box sliding on top of the stock and moved by a lever pivoted to both. Moving the lever forwards and back drew the bow, dropped a bolt in position, and discharged the crossbow. The repeating action enabled the crossbowman to discharge his magazine of usually 10 or 12 arrows in about 15 seconds. This made the weapon particularly useful for defending fortified positions. However, the bolt was short and light, and the weapon comparatively weak in penetrative power, so its steel head was sometimes dipped in poison. The bolt had no feathers. The length of the bolt was from 0.30m to 0.40m, depending on the size of the crossbow. Its diameter was 0.78–0.94cm. The bow was made of one or several stout pieces of bamboo, about 1.05m long. The bowstring consisted of animal sinew twisted into a cord.[15]

There was also a variant of the repeating crossbow with parallel grooves instead of the usual single one. This repeating crossbow, barely two centimetres wider than the regular one but otherwise identical in function and use, had a magazine divided into two compartments. The crossbow thus

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[11] Sir Ralph Payne-Gallwey, *A Summary of the History, Construction and Effects in Warfare of the Projectile-Throwing Engines of the Ancients, with a Treatise on the Structure, Power and Management of Turkish and Other Oriental Bows of Mediaeval and Later Times* (Tonbridge: Pallas Armata, 1994), p.18.

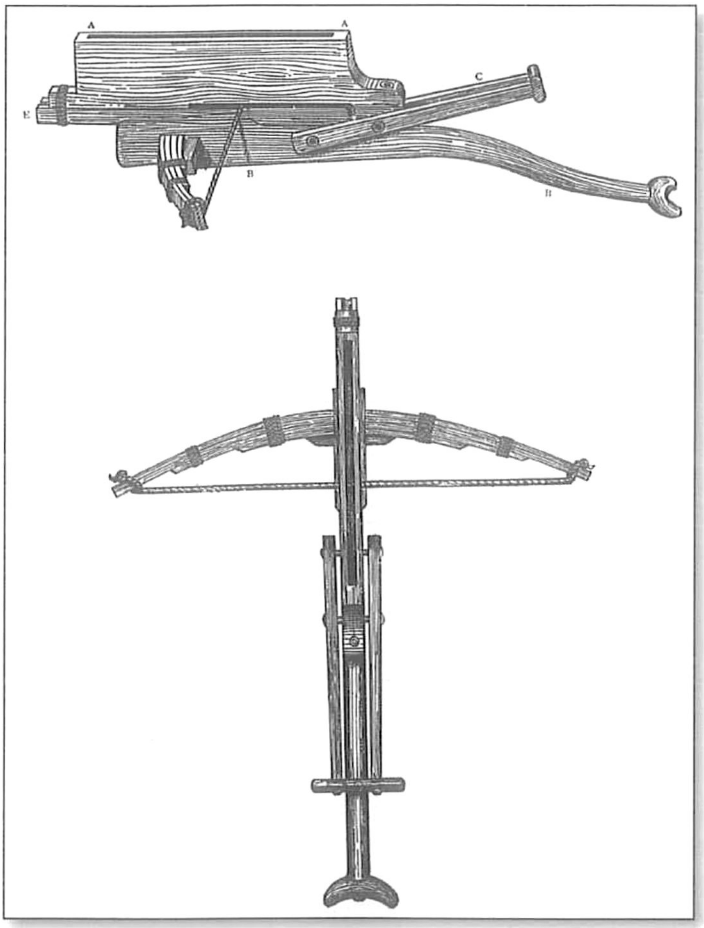
[12] See, for example, Spence, *Emperor of China*, p.18; Rawski, *Last Emperors*, p.45.

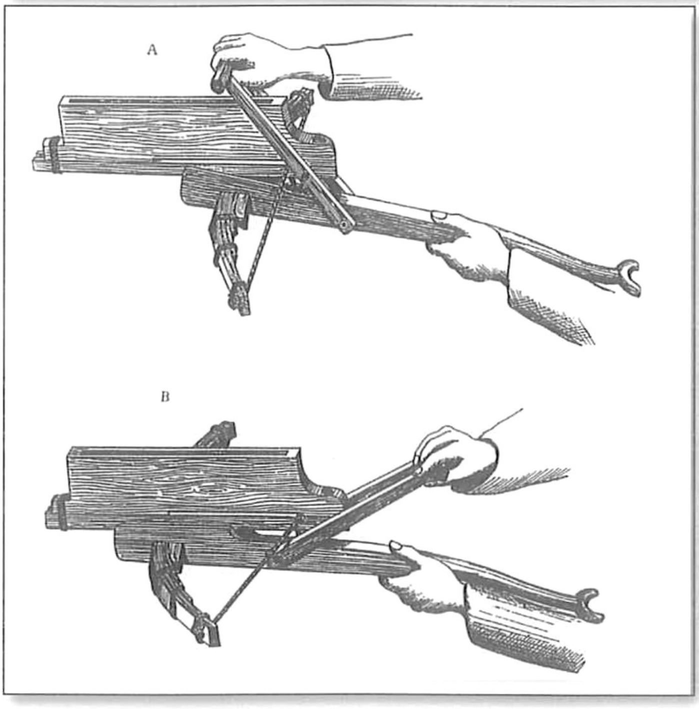
[13] Lamprey, 'Economy', p.428.

[14] Lorain, 'L'arc de guerre', p.14.

[15] Sir Ralph Payne-Gallwey, *The Crossbow, Mediaeval and Modern, Military and Sporting: Its Construction, History, and Management, with a Treatise on the Balista and Catapult of the Ancients* (London: Longmans, Green and Co., 1903), pp.237–42. See also Stone, *Glossary*, pp.180–81; Needham et al., *Science and Civilisation*, vol. 5, part 6, pp.120–78.

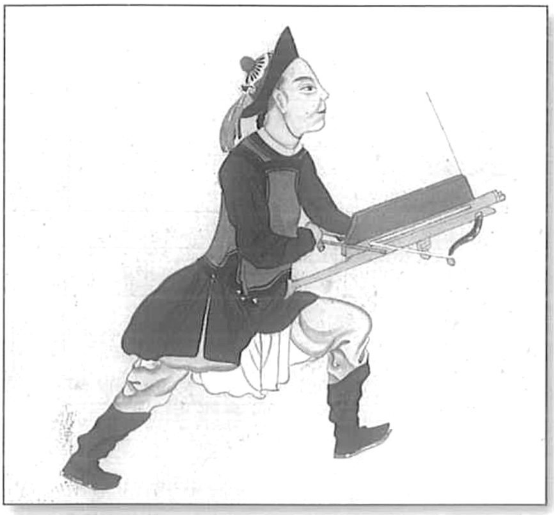
Repeating crossbow. (Sir Ralph Payne-Gallwey, 1903)





discharged two bolts instead of one every time it was fired. A specimen of this kind in the Smithsonian Museum has a magazine for 20 bolts.[16]

The effective range of the repeating crossbow was about 70m, with an extreme range of from 160m to 180m.



Bannerman firing a repeating crossbow. (*Bingji zhizhang tushuo*, 1843)

Spears and Polearms

Chinese armies traditionally relied on a multitude of different polearms, and the Qing were no exception, even though bannermen, unlike some local forces, tended to use only the more practical and simple types. Qing infantry could be armed with spears and shields as late as in 1681, although shields were, by then, falling out of use except for sword-and-buckler men.[17] Spears (*qiu*) came in different types and, when wooden-shafted (*mu ganzu*), varied in length from about 2.3m to 4.8m. Bamboo-shafted (*chu ganzu*) spears, often made of bundles of split bamboo, were even longer, ranging from about 5.7m to 6.4m. In both types, the spearhead would range from 0.25m to 0.3m in length. Cavalry spears were generally just above two metres long (between 1.8m and 2.1m according to foreign observers), while, judging from contemporary illustrations, those used by infantry were commonly longer.[18]

Other polearms included the *ji*, or halberd; the *tianhuafu* or *banyuefu*, a kind of halberd-like axe so named from the crescent on one side; a variety of glaives (*da dao*, single-edged 'big swords'); and the trident (*cha*). Lengths varied from about 1.4m to 2.5m. A specimen trident has a steel head 0.75m long and 0.39m across the points. Tridents are known to have varied in length from about 2.1m to as much as 3.7m. These polearms were more commonly used by Chinese than Manchu soldiers, although bannermen infantry units, according to eighteenth-century illustrations (in *Bibliothèque nationale*, Paris, more on which below), included teams of men armed with tridents.[19]

Many polearms were decorated in various ways. Bannerman cavalry lances had red horse- or yak hair hanging from the shaft where it joined the ironwork.[20] Judging from contemporary illustrations, cavalry lances had two

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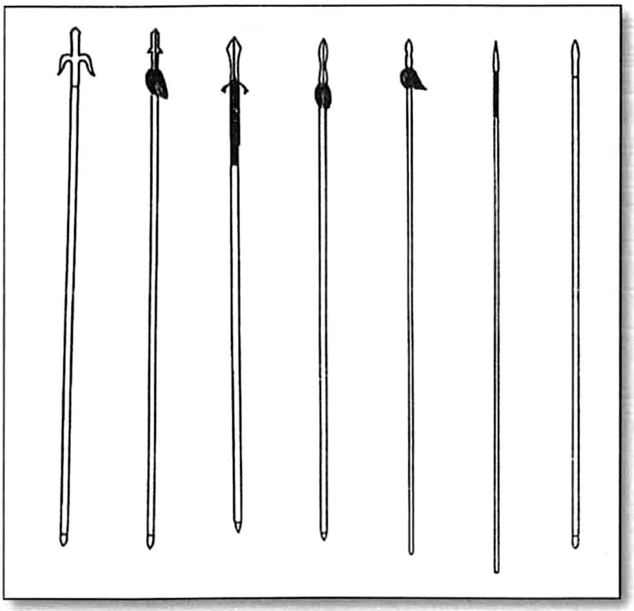
[16] See, for example, C. M. Wilbur, *The History of the Crossbow, Illustrated from Specimens in the United States National Museum* (Washington, DC: United States Government Printing Office, 1937), from the Smithsonian Report for 1936, p.436.

[17] See, for example, Di Cosmo (trans.), *Diary*, pp.63, 65.

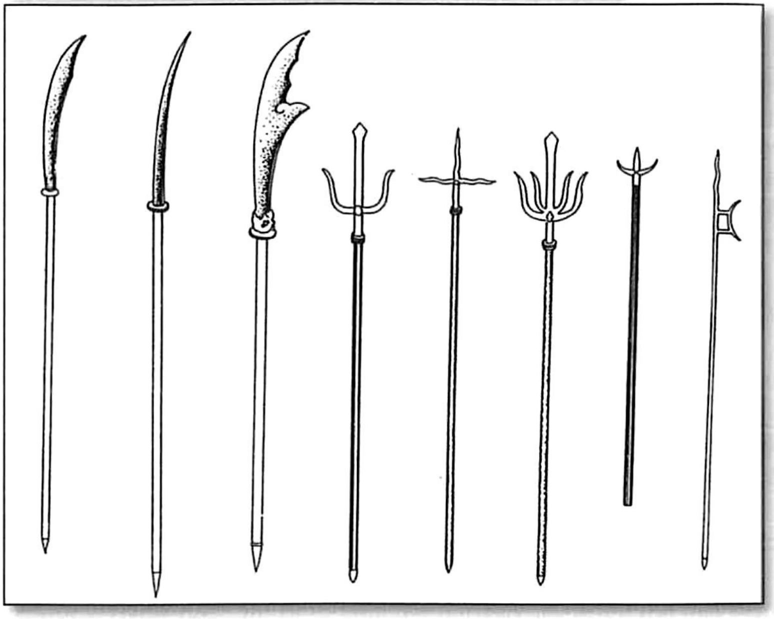
[18] Lamprey, 'Economy', p.427; Heath, *Armies of the Nineteenth Century: Asia 2*, p.45.

[19] See, for example, Wei Zhou, *Zhongguo bingqi shigao* (Peking: Sanlian shudian, 1957), pp.18–25; Heath, *Armies of the Nineteenth Century: Asia 2*, p.45.

[20] Lamprey, 'Economy', p.427.



Spears (*qiu*). Not to scale. (Anon.)



Polearms. Not to scale. (Anon.)

straps: one by which the lance was carried over the shoulder and the other that secured the lance at the owner's foot when mounted on horseback.

Swords

The sword was – exactly as in Europe – regarded as the chief among the 'cold weapons' (*lengbingqi*), as the Chinese called those weapons not employing gunpowder or other explosive charges. However, and again in similarity to Europe, the sword decreased in combat value as firearms were introduced.

Oldest was the often quite long, narrow, double-edged sword (*jian*). It was somewhat archaic, no longer used for military purposes and, for this reason, often regarded as a Chinese nobleman's weapon. Nonetheless, Nurgaci used such a sword, and similar, if less robust, swords were used by his descendants as well, at least for ceremonial purposes. The double-edged sword's employment in war declined during the Qing period.

The Qing military relied on single-edged swords of the general type earlier introduced by Mongols and other steppe nomads. The single-edged sword was developed for cavalry use and was the principal sidearm of the Manchu cavalry. Originally straight or almost straight in shape, the single-edged sword (Manchu: *loho*; Chinese: *dao*) was, by the time of the Qing, slightly curved and functioned as a cutlass or broad sabre. In Qing military usage, it was known as a 'waist-carried sword' (*yaodao* or, from the eighteenth century, *peidao*). The original straight variety of single-edged sword (presently known as a 'straight-back sword', *zhibeidao*), by then, only survived in Tibet, Yunnan, and similarly remote areas. Some single-edged blades were affixed to poles and used as glaives (*da dao*), described above. A *dao* was occasionally awarded a successful general as a symbol of loyalty. Some swords were regarded as treasured imperial heirlooms and awarded again and again in different campaigns and to different generals. Others, especially by the end of the period, were of poor quality and made of soft iron that might bend when used.[21]

Over time, the once-straight single-edged sword developed further. The earliest Qing type was characterised by a straight cutting edge until the point of beginning of the blade's dorsal back-edge, from which point it curved slightly upwards towards the point. This type is presently known as a 'goose-quill sword' (*yanlingdao* or, currently more common, *yanmaodao*), although an early designation may also have been 'sprout sword' (*miaodao*). At a somewhat later point in time, the cutting edge developed a gentle curve throughout its length. The arc began gradually close to the hilt and accelerated towards the point. Alternatively, the maximum curve was close to the hilt and decreased towards the point. The type is presently known as a 'willow-leaf sword' (*liuyedao*). By the end of the Qing empire, the willow-leaf sword was the most common type in the Qing army. Many such blades were fitted with an iron or brass sleeve with a scalloped outline next to the hilt.

A type of single-edged sword with a yet deeper curve was the 'slicing sword' (*piandao*), which has been known under this name since 1766. On the surface, it differs but little from other willow-leaf swords. It was primarily carried by specially trained swordsmen such as tiger men and other sword-and-buckler soldiers.

Scabbards were made of wood. They were often covered in leather or polished ray skin or lacquered, so they could be of any colour, for instance, black, dark green, chestnut brown, red, or embellished in golden brown. Scabbards were frequently highly decorated with gilded metal parts, often with inlaid gems, or cloisonné enamel.

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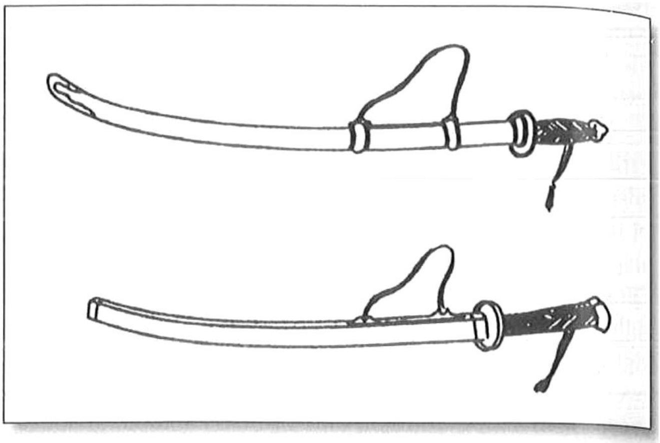
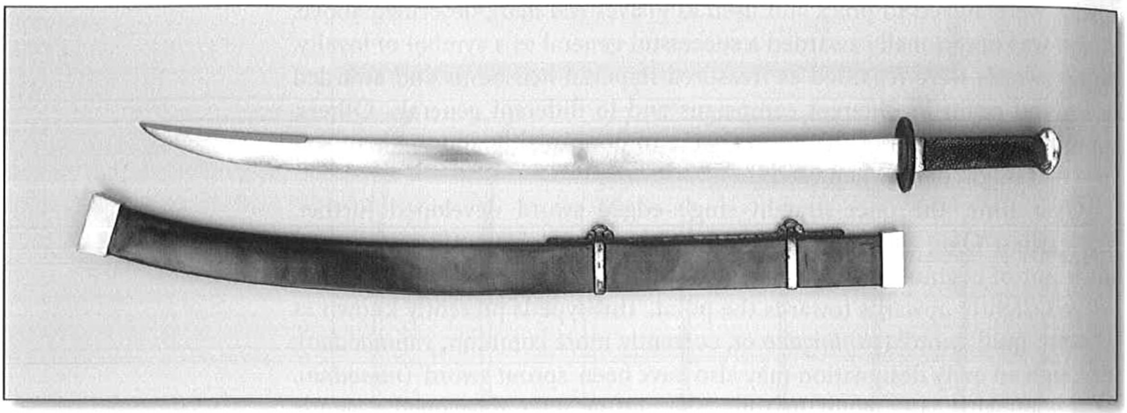
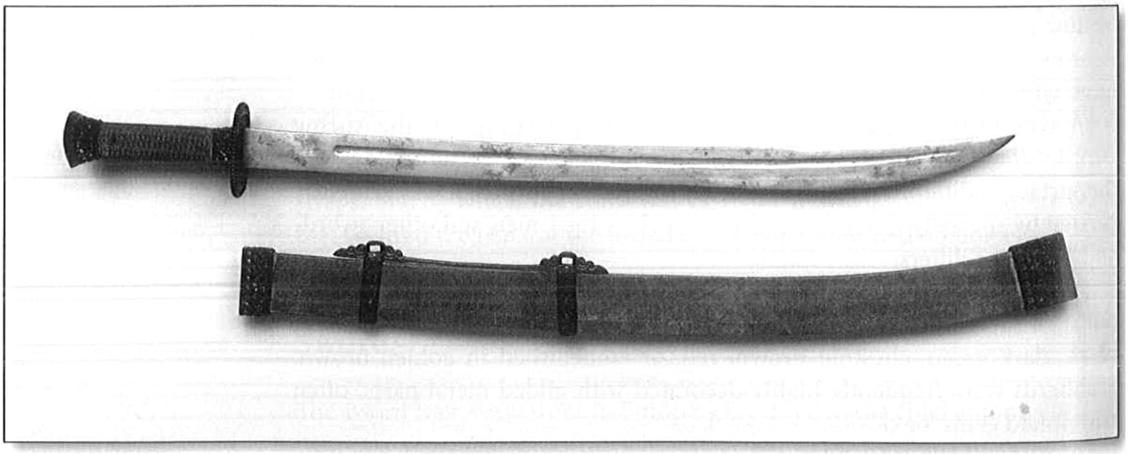
[21] Lamprey, 'Economy', p.427.

Single-edged swords (*dao*), 1621. In military manuals, typology was based on fittings rather than style of blade. Below: the older 'goose-quill' type with scabbard and fittings in the angular style, squarely cut chape, and hoof-shaped pommel. Above: the 'willow-leaf' type with scabbard and fittings in the rounded style and rounded chape, which, although in existence already during the late Ming period, became common only in the late eighteenth century. (*Wubeizhi*)

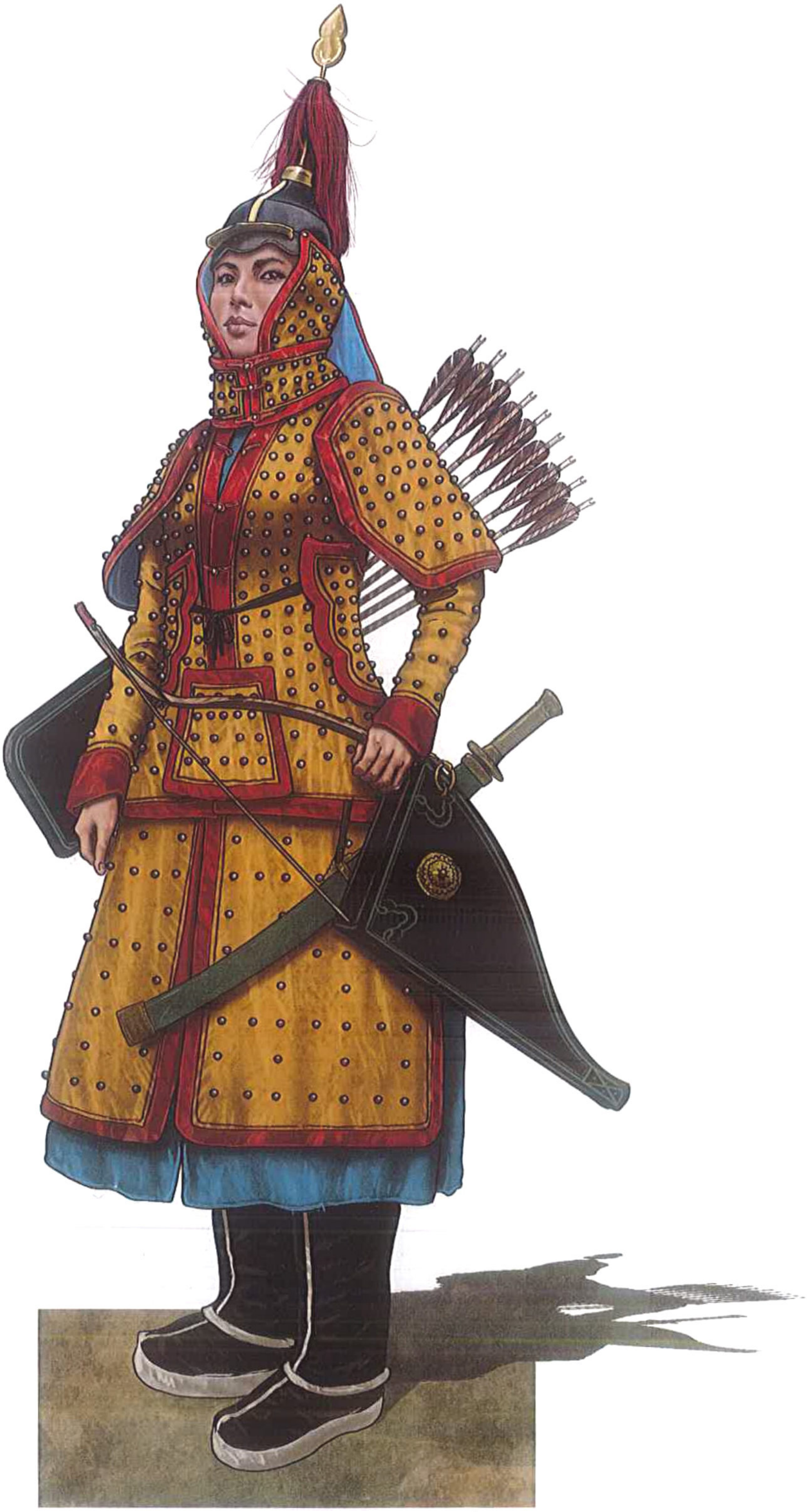




Single-edged sword of the goose-quill type with scabbard and fittings in the angular style and squarely cut chape, seventeenth century. Blade length: 72.4cm. (Peter Dekker, Mandarin Mansion)



Single-edged sword of the goose-quill type with scabbard and fittings in the angular style and squarely cut chape, early to mid-eighteenth century. Total length: 85cm. Blade length: 69.5cm. (Moscow Kremlin Armoury)



A Banner Officer in Full Armour

(Artwork by Giorgio Albertini © Helion & Company 2024)

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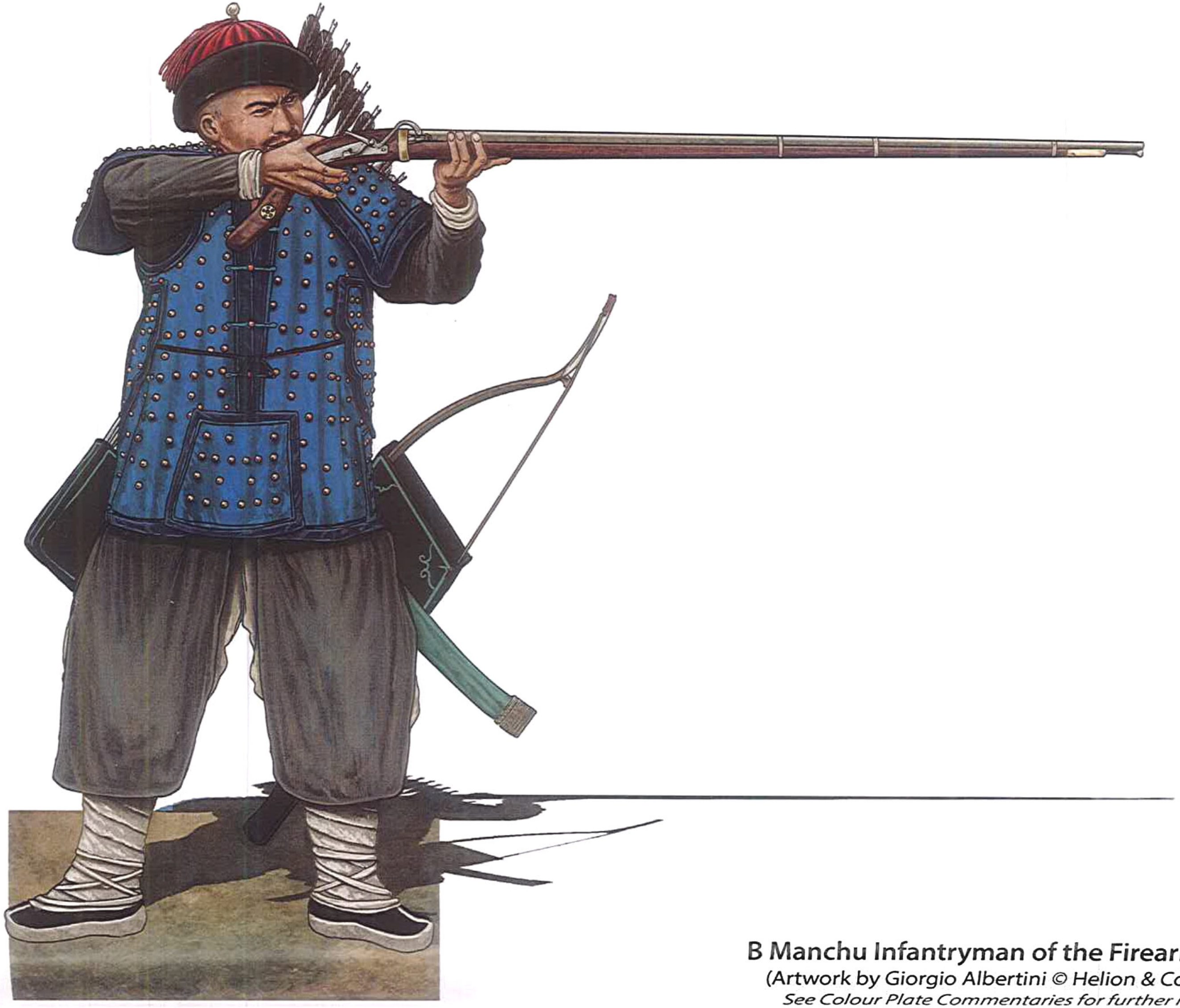

B Manchu Infantryman of the Firearms Regiment

(Artwork by Giorgio Albertini © Helion & Company 2024)

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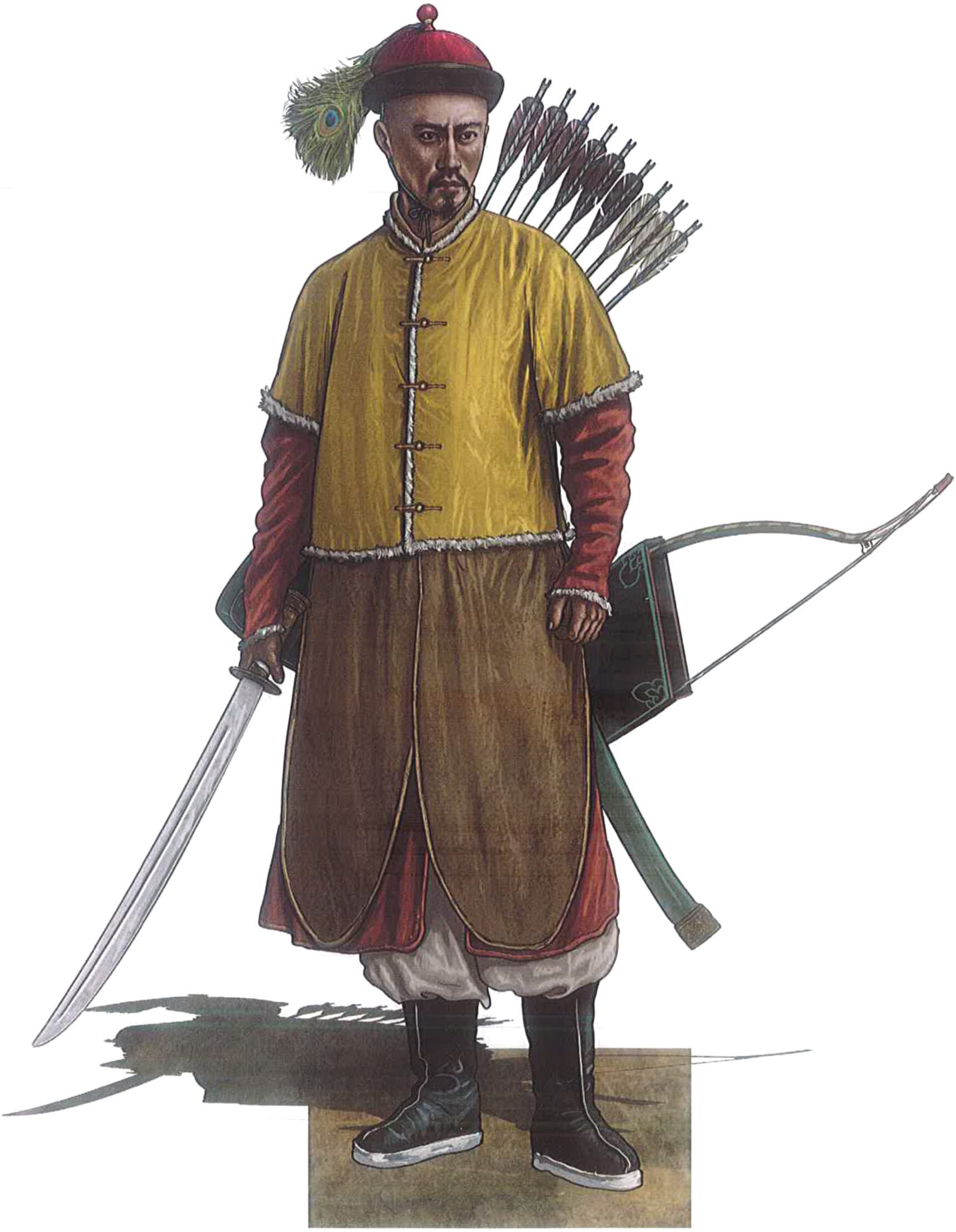

C Imperial Guardsman in Field Uniform
(Artwork by Giorgio Albertini © Helion & Company 2024)
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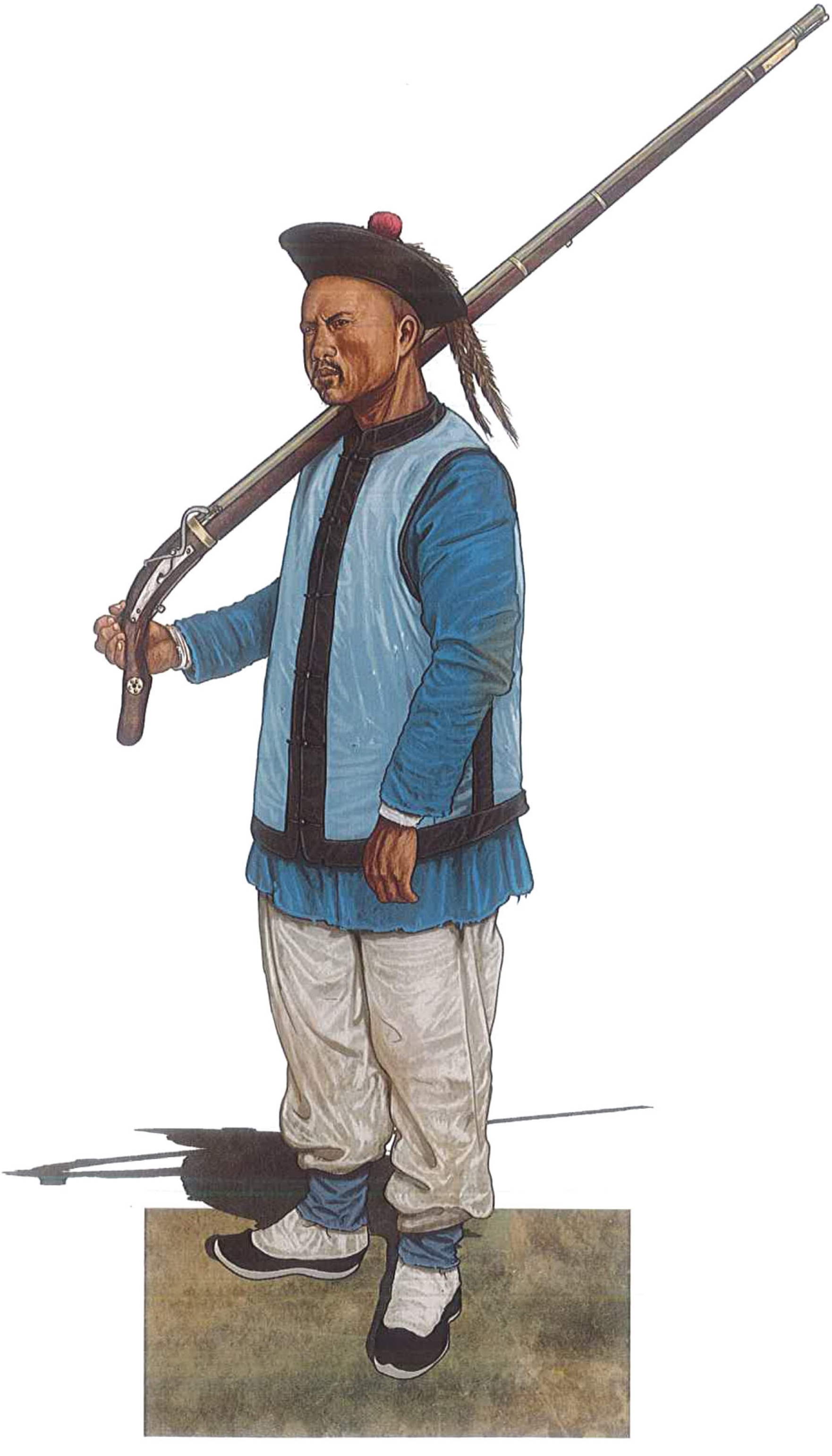

D Infantryman of a Green Standards Unit

(Artwork by Giorgio Albertini © Helion & Company 2024)

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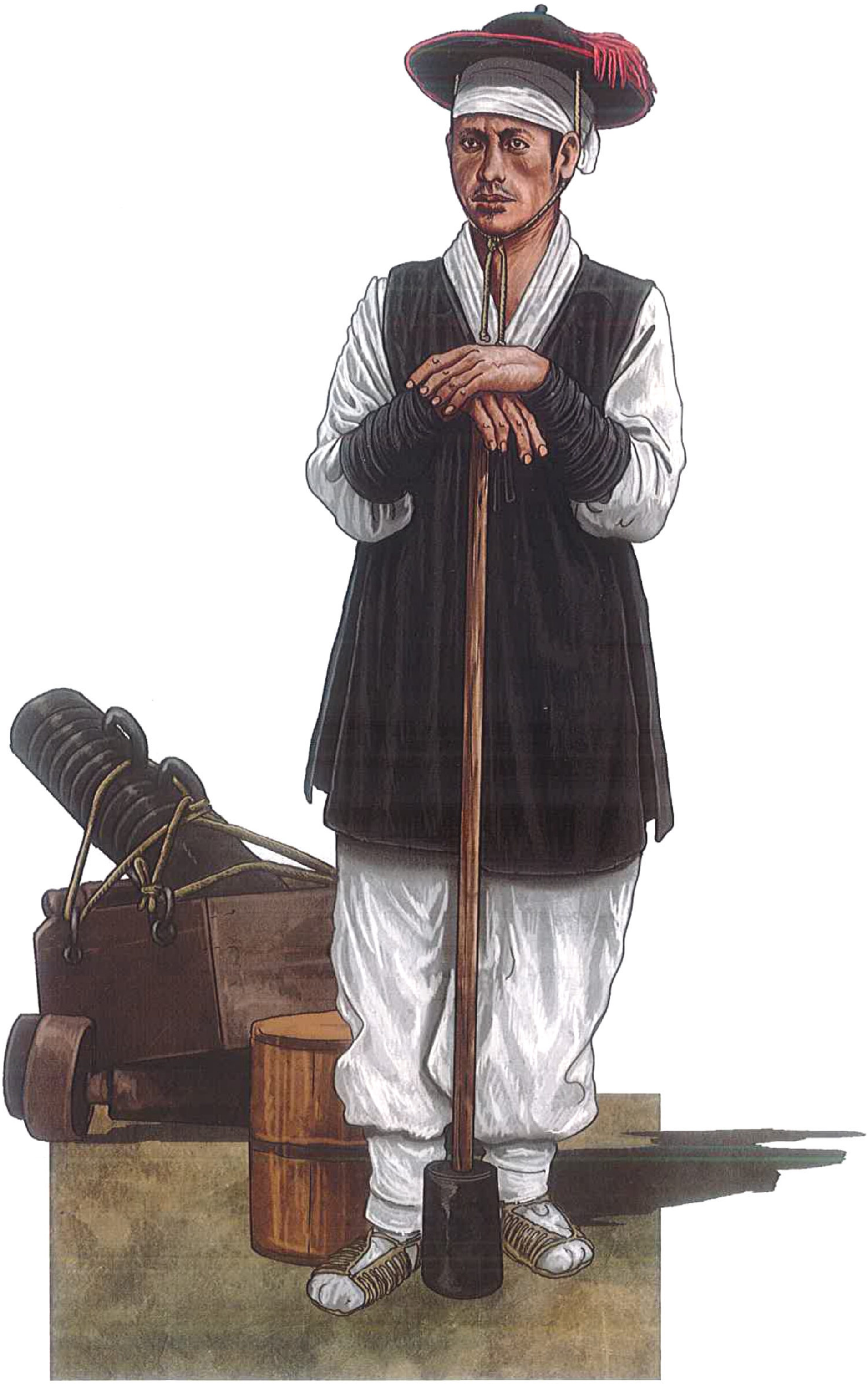
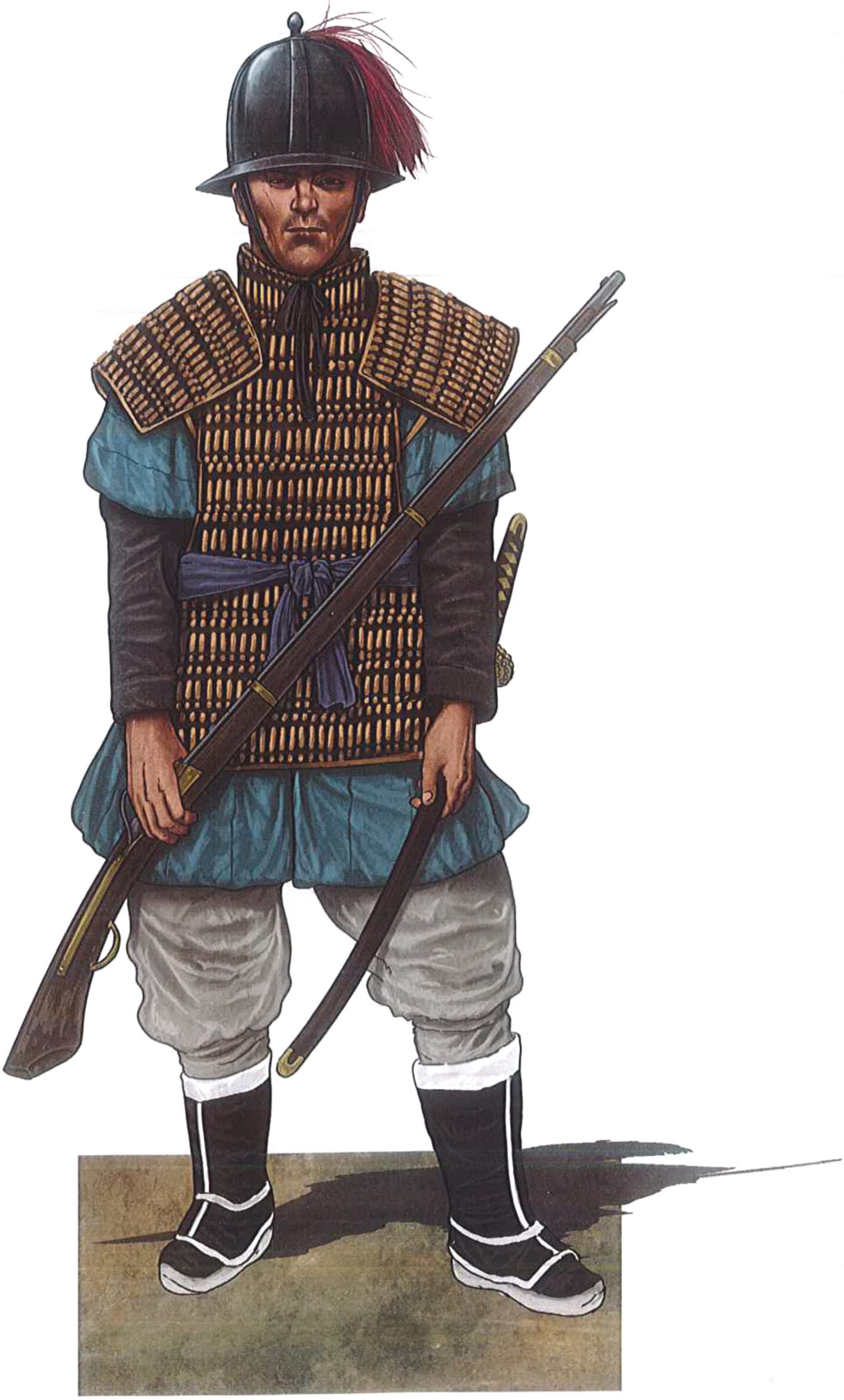


E Korean Artilleryman, 1641
(Artwork by Giorgio Albertini © Helion & Company 2024)
See Colour Plate Commentaries for further information



F Korean Musketeer, 1658
(Artwork by Giorgio Albertini © Helion & Company 2024)
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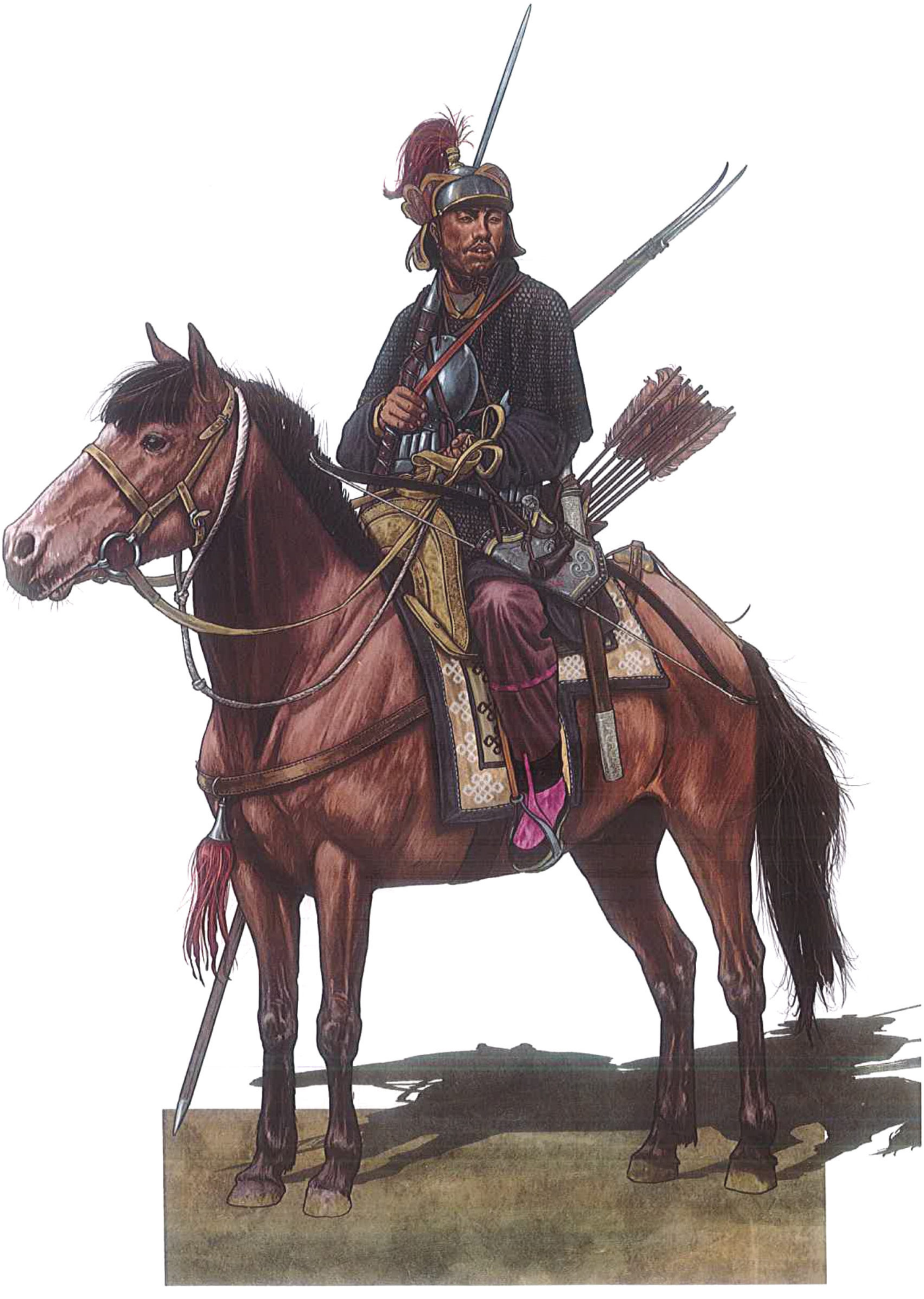

G Tibetan Cavalryman, 1720

(Artwork by Giorgio Albertini © Helion & Company 2024)

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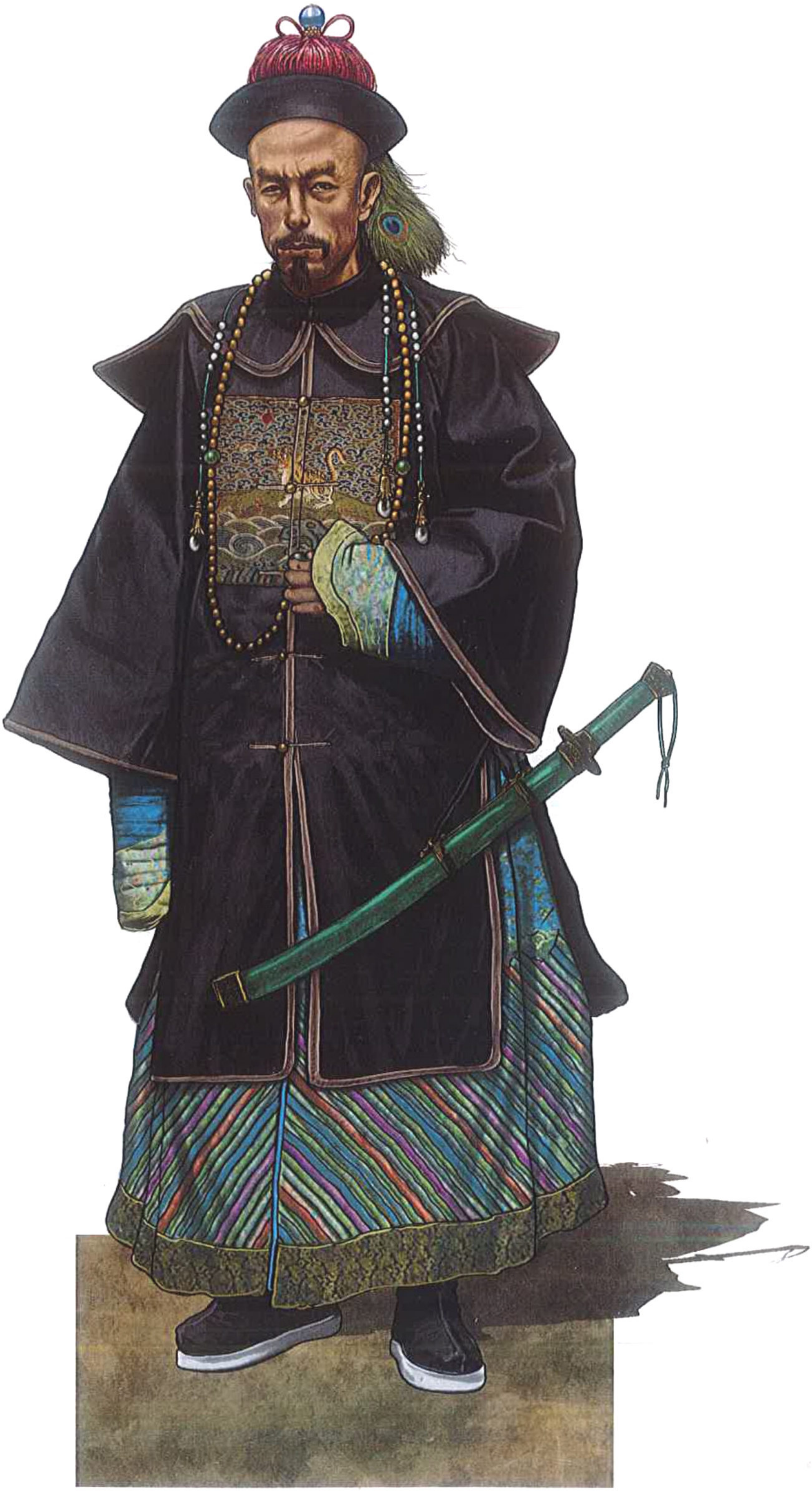
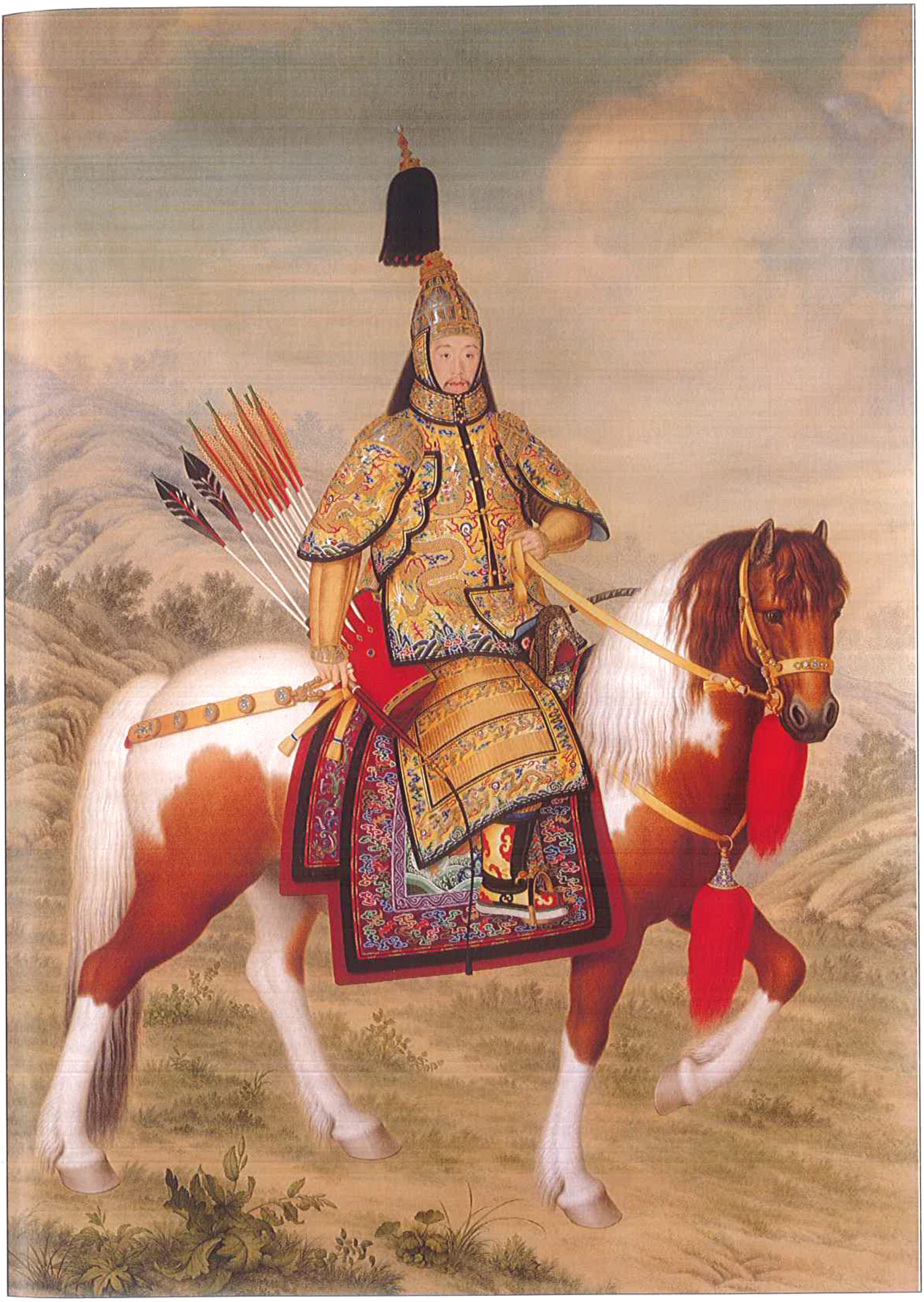
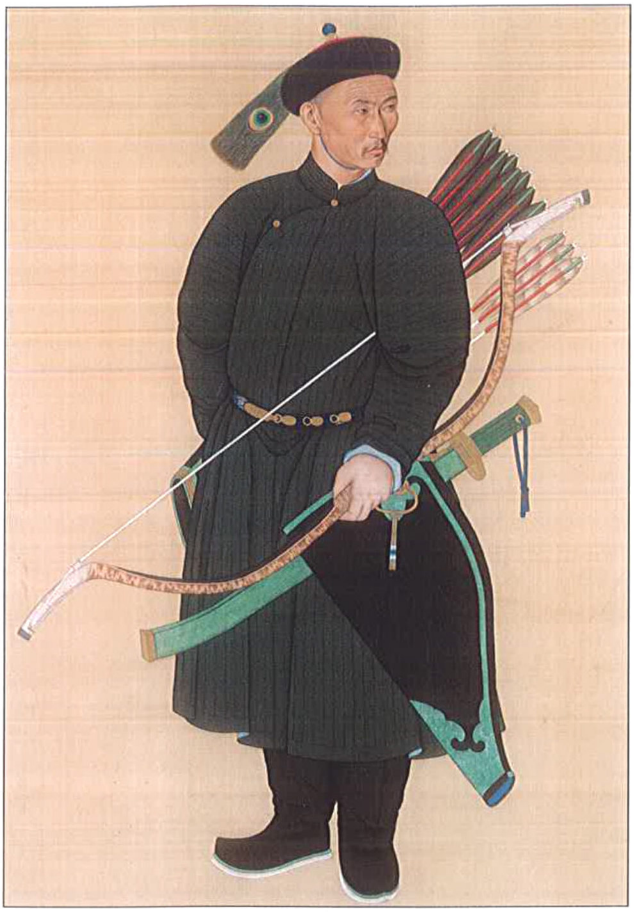


H Officer in Full Dress
(Artwork by Giorgio Albertini © Helion & Company 2024)
See Colour Plate Commentaries for further information



I Qianlong Emperor in Ceremonial Armour
(Illustration by Giuseppe Castiglione)
See Colour Plate Commentaries for further information



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J

1. Imperial Bodyguard of the Imperial Guards, Brigadier Janggimboo

(Illustration by anonymous artist)

See Colour Plate Commentaries for further information

2. Imperial Guard Officer Ma Chang

(Illustration by Giuseppe Castiglione)

See Colour Plate Commentaries for further information

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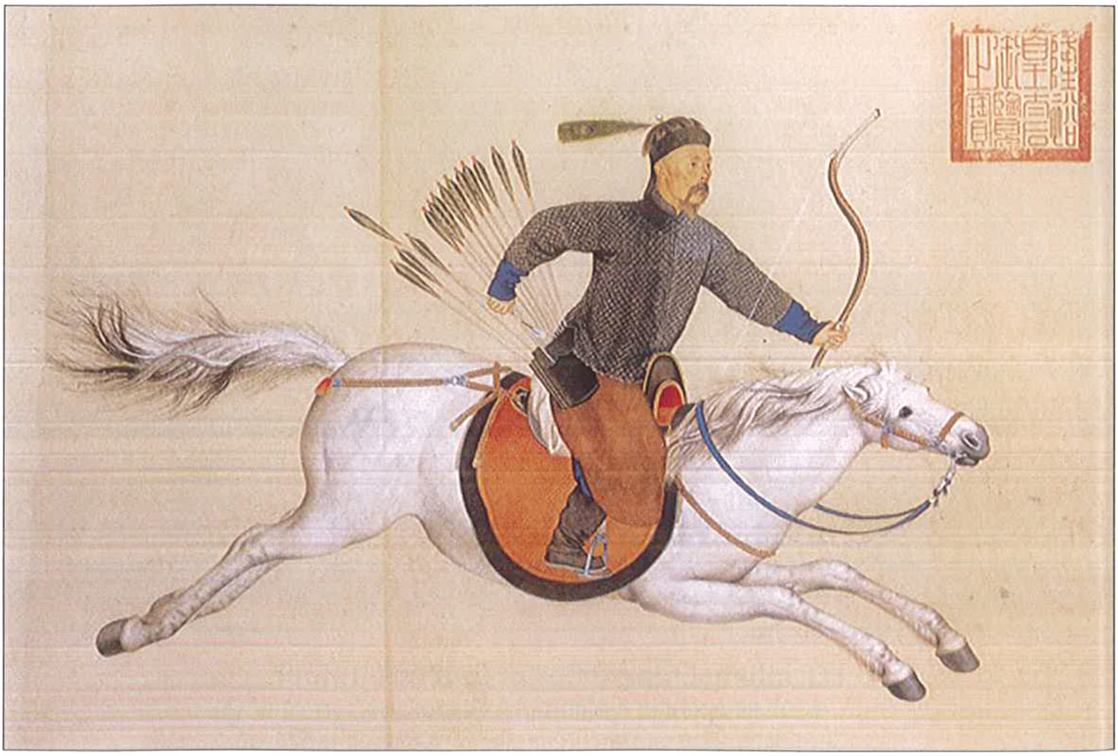

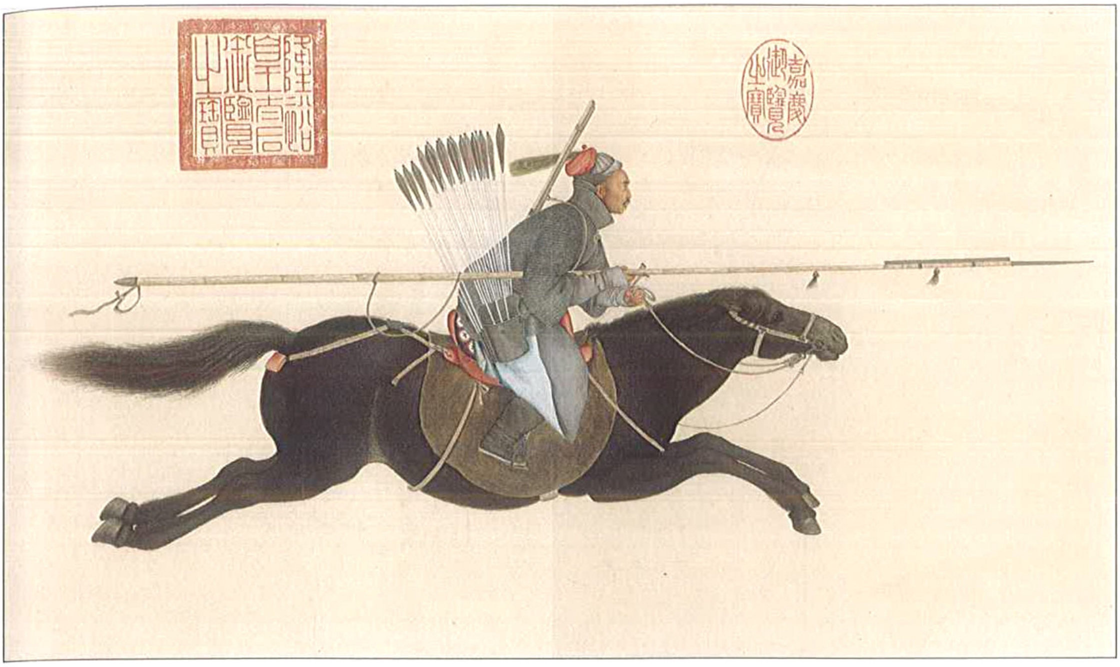

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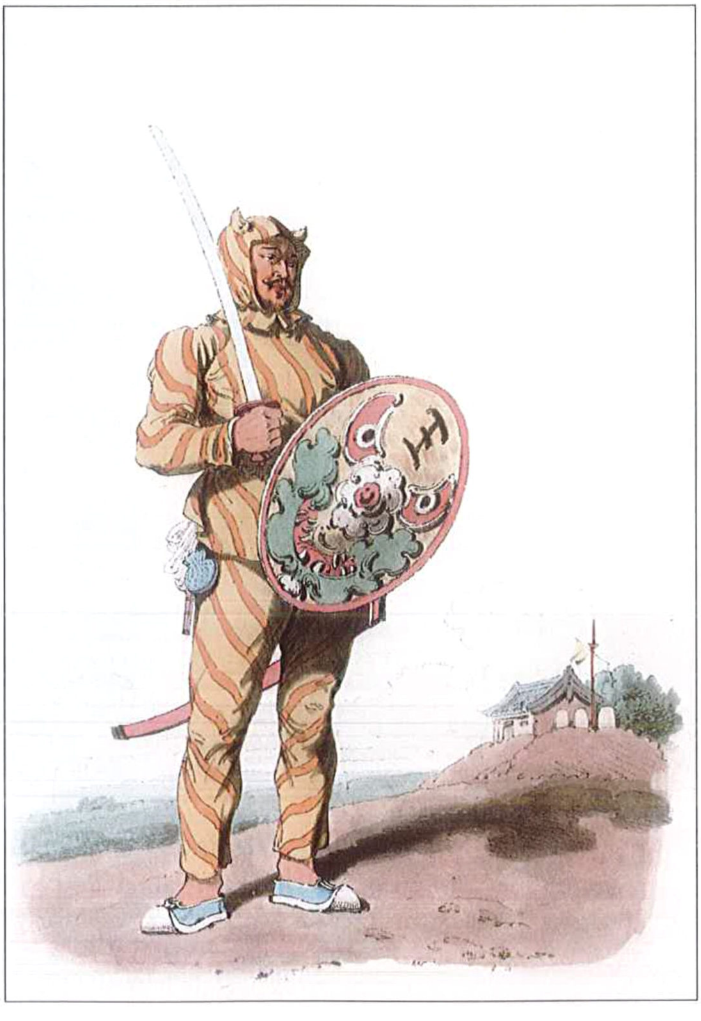


K

1. Imperial Guard Officer Ayusi

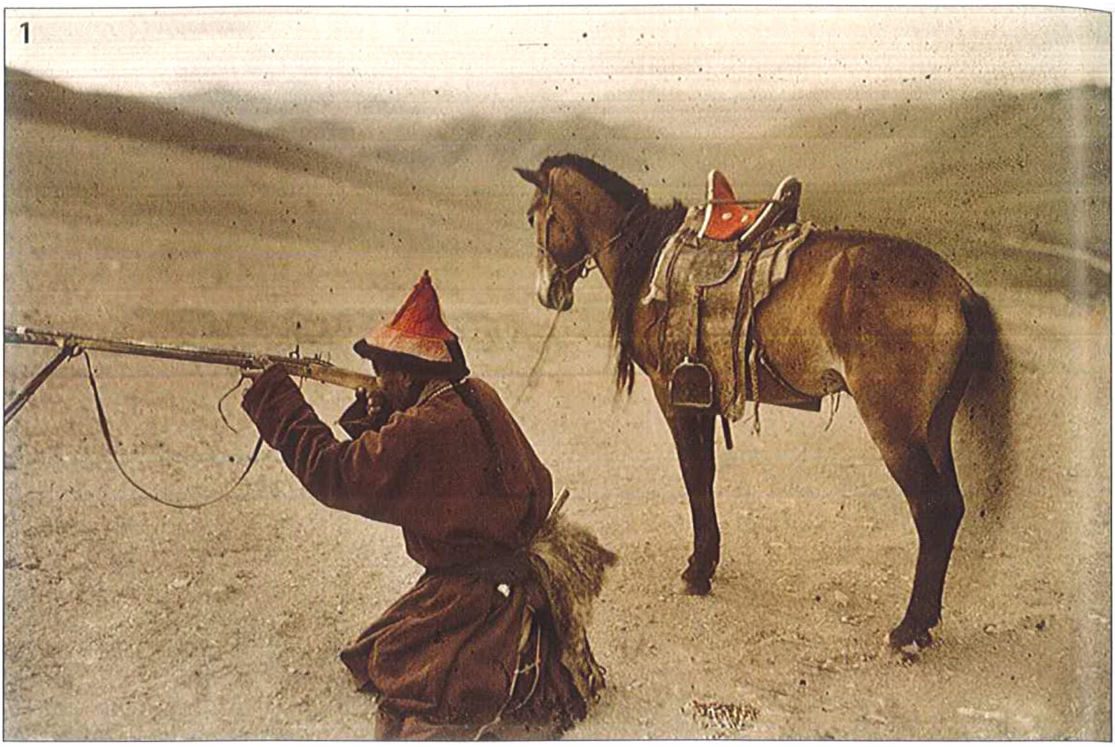
(Illustration by Giuseppe Castiglione)

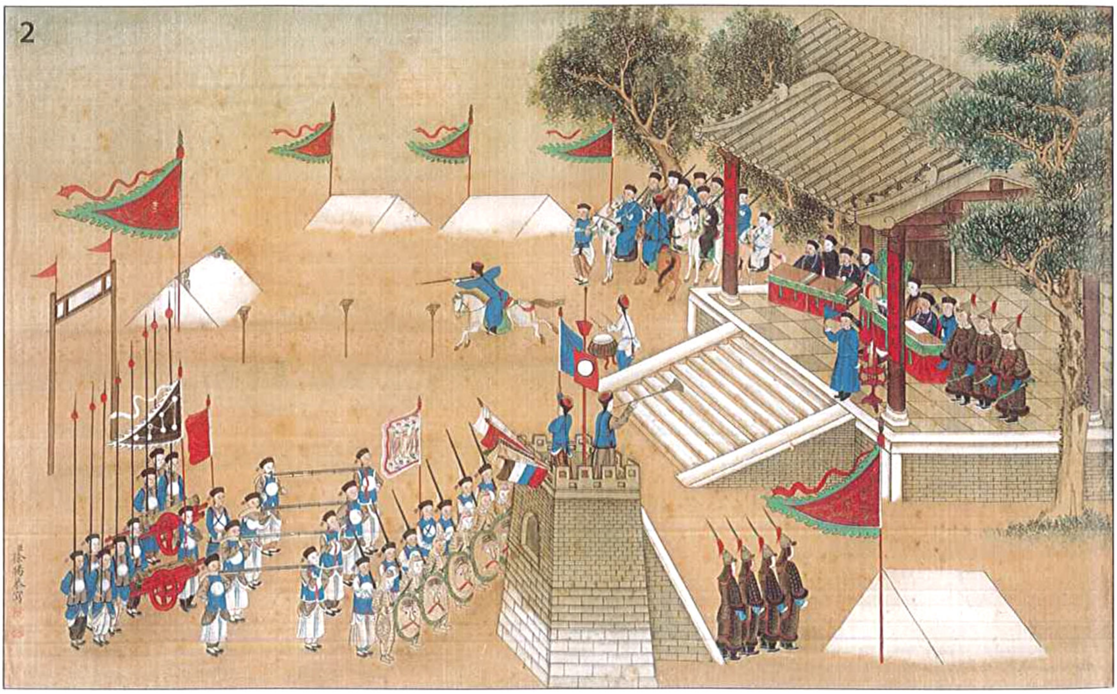
See Colour Plate Commentaries for further information

2. Tiger Man

(Illustration by William Alexander)

See Colour Plate Commentaries for further information





L

1. Mongol Auxiliary

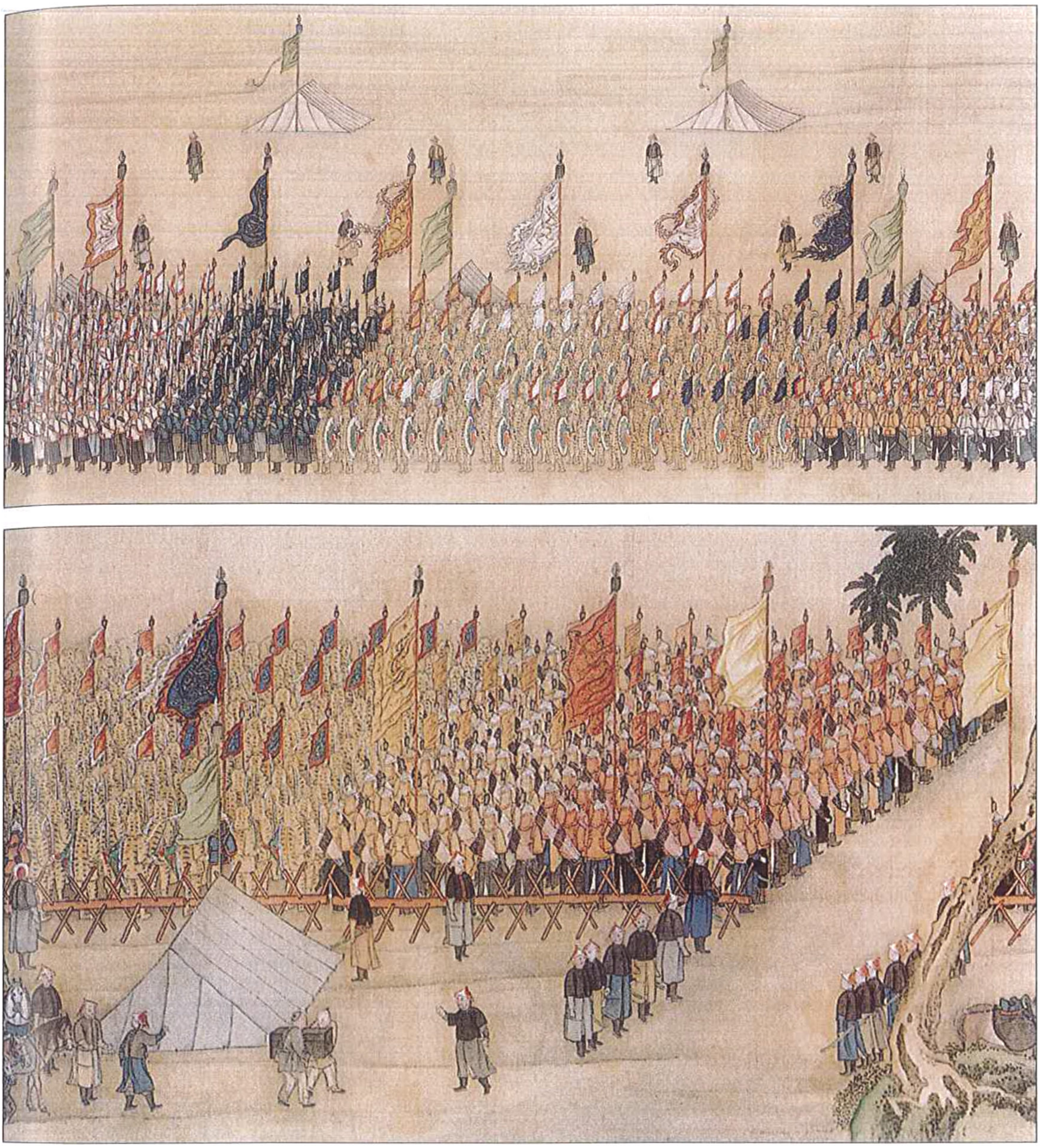
(Photograph by Stefan Passe)

See Colour Plate Commentaries for further information

2. Qing Soldiers

(Illustration by Xu Yang)

See Colour Plate Commentaries for further information

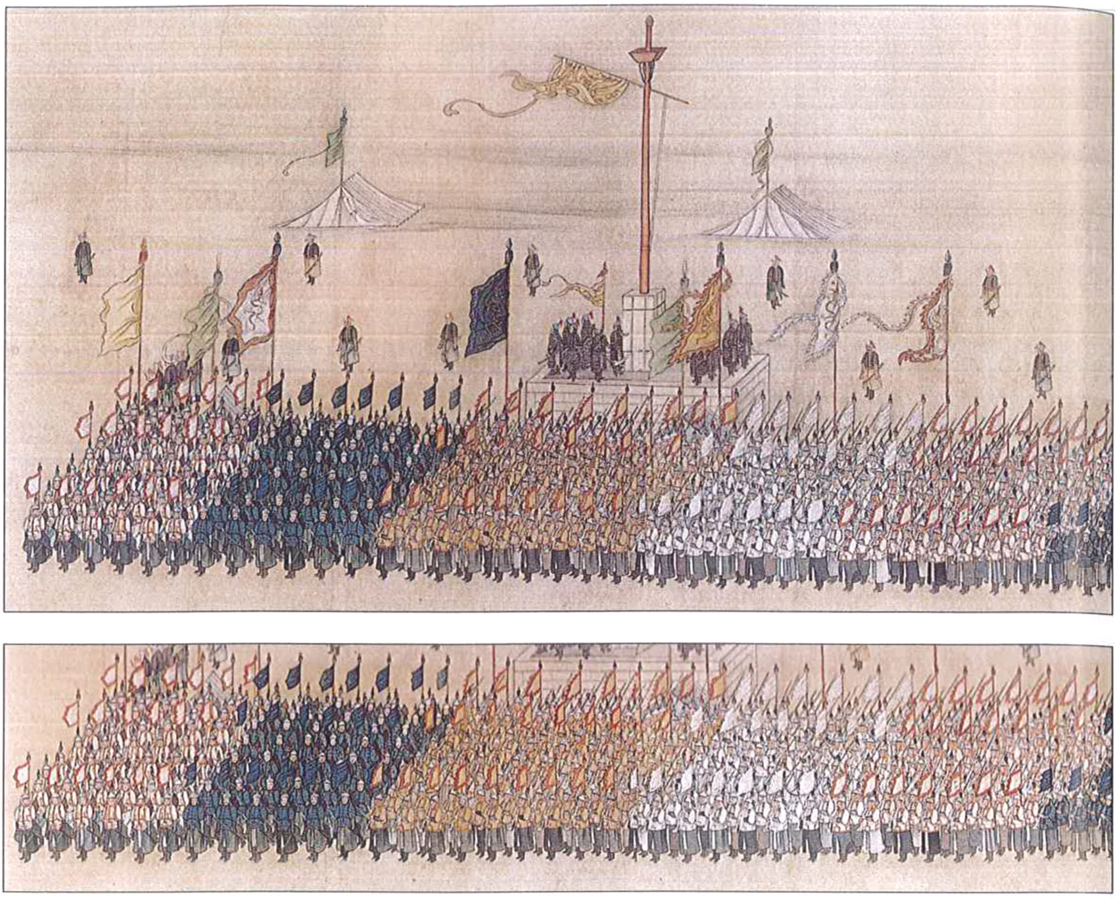


M

Grand Review of the Imperial Army

(Illustration by Xu Yang)

See Colour Plate Commentaries for further information



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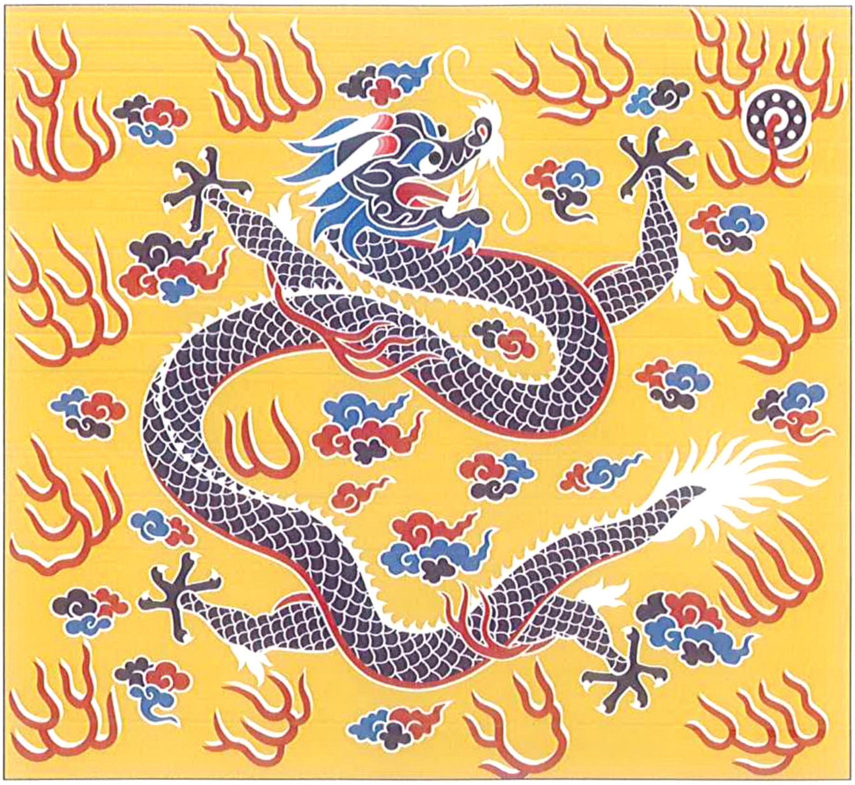
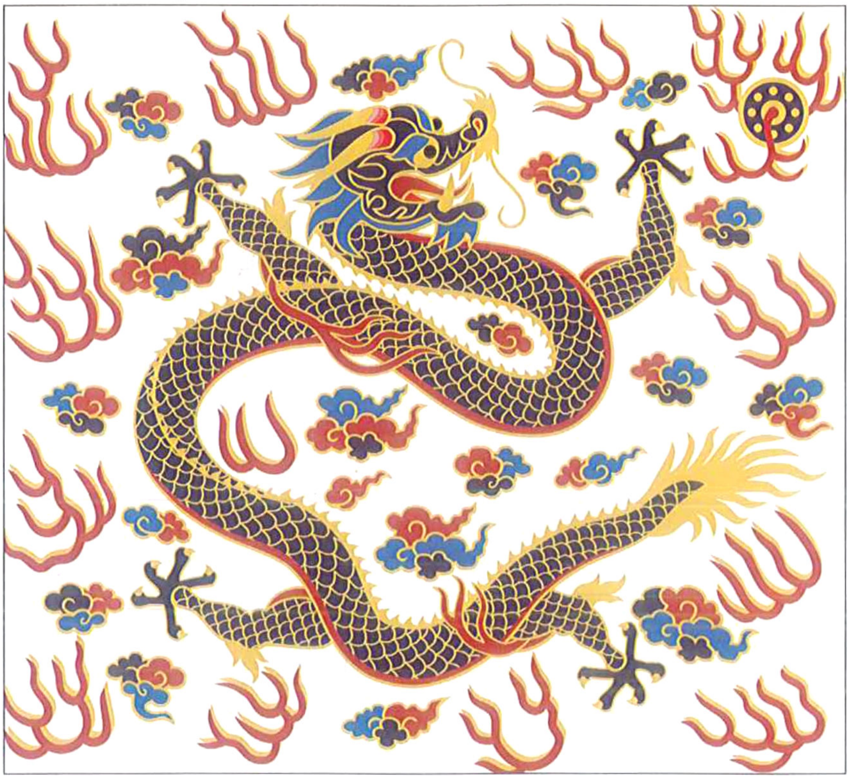
Grand Review of the Imperial Army

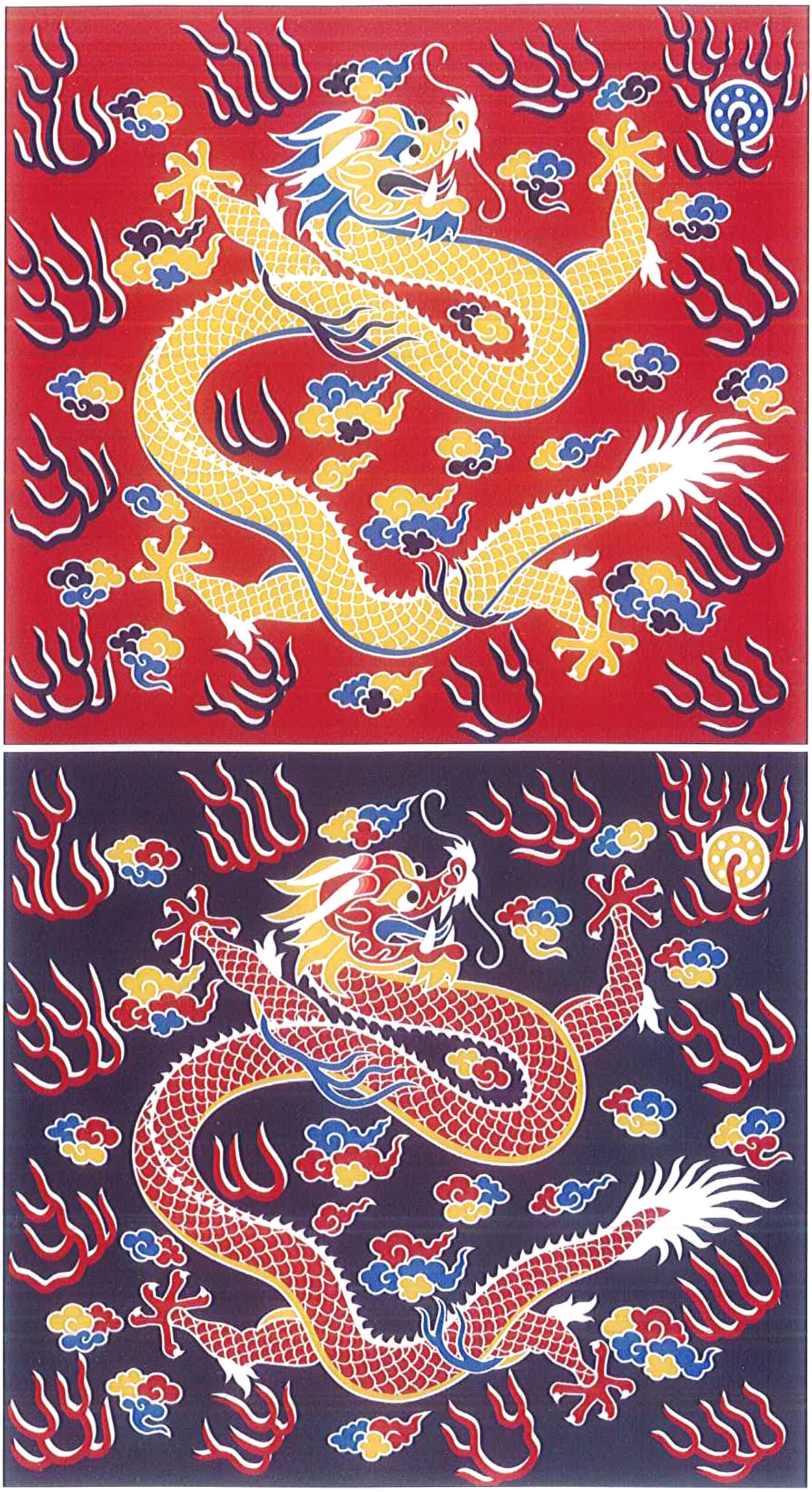
(Illustration by Xu Yang)

See Colour Plate Commentaries for further information





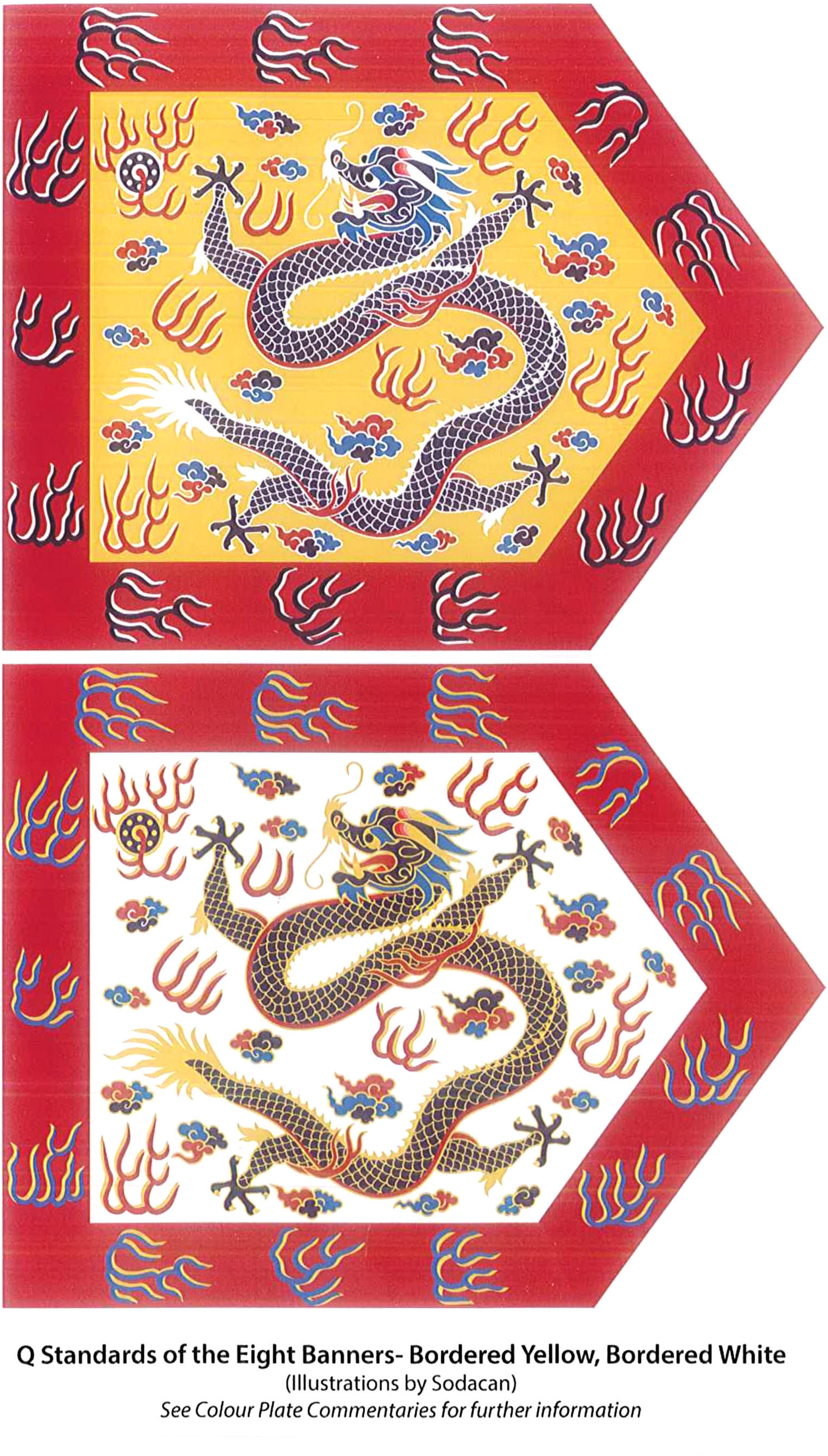
O Standards of the Eight Banners- Plain Yellow, Plain White
(Illustrations by Sodacan)
See Colour Plate Commentaries for further information



P Standards of the Eight Banners- Plain Red, Plain Blue

(Illustrations by Sodacan)

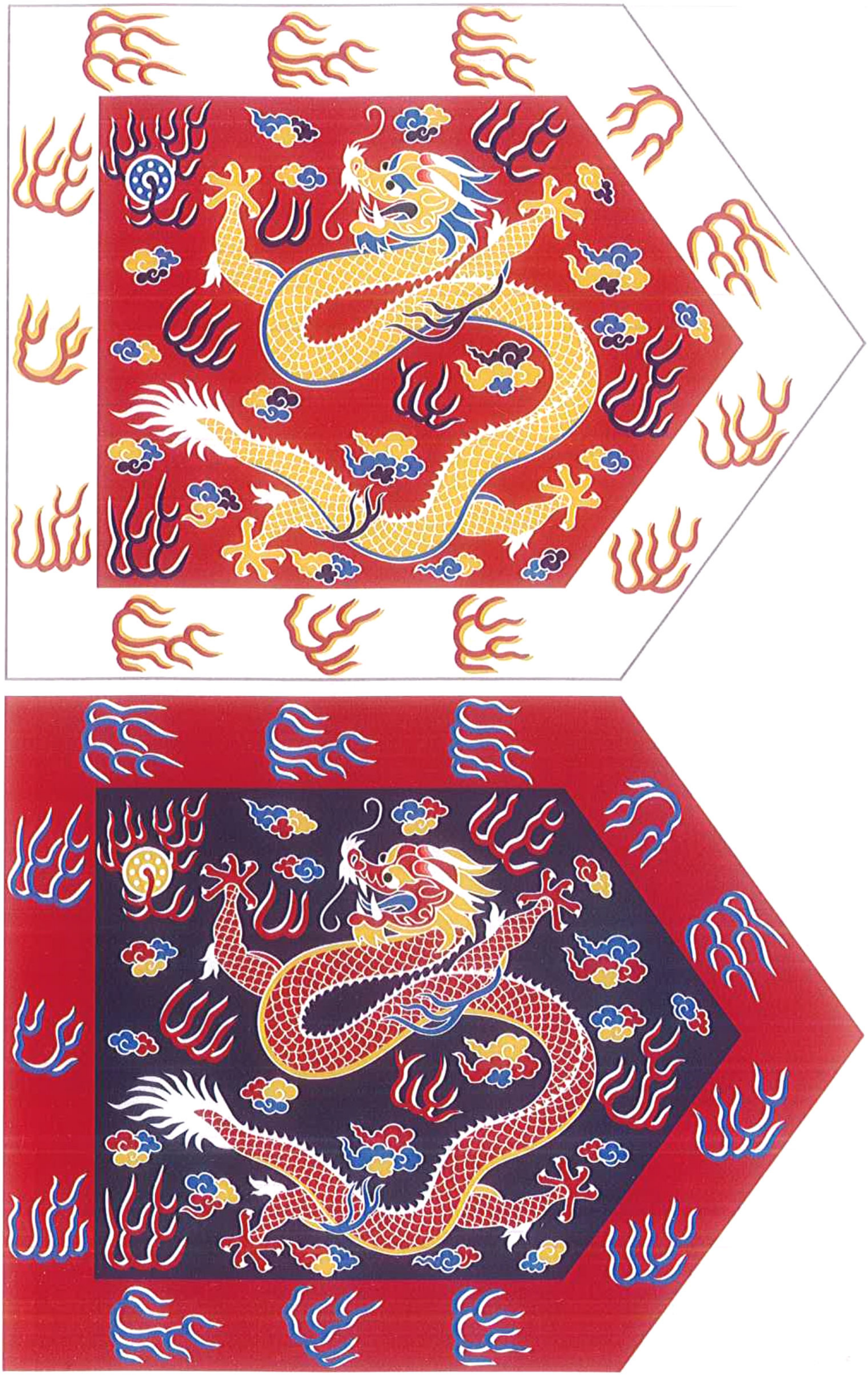
See Colour Plate Commentaries for further information



Q Standards of the Eight Banners- Bordered Yellow, Bordered White

(Illustrations by Sodacan)

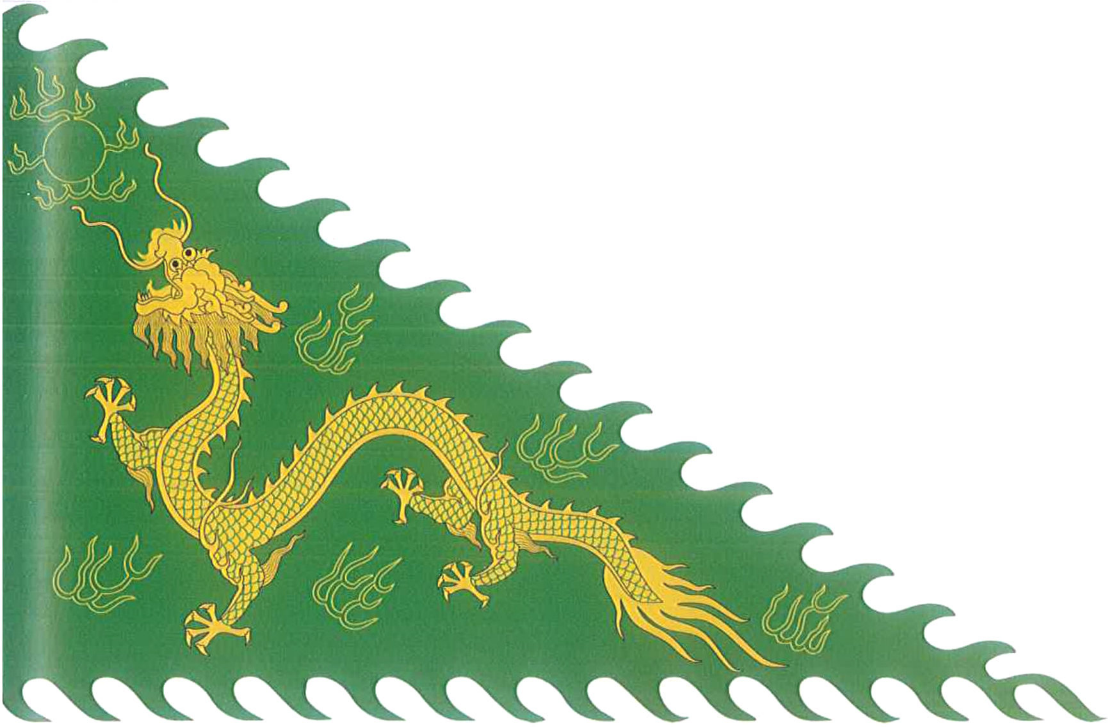
See Colour Plate Commentaries for further information



R Standards of the Eight Banners- Bordered Red, Bordered Blue

(Illustrations by Sodacan)

See Colour Plate Commentaries for further information



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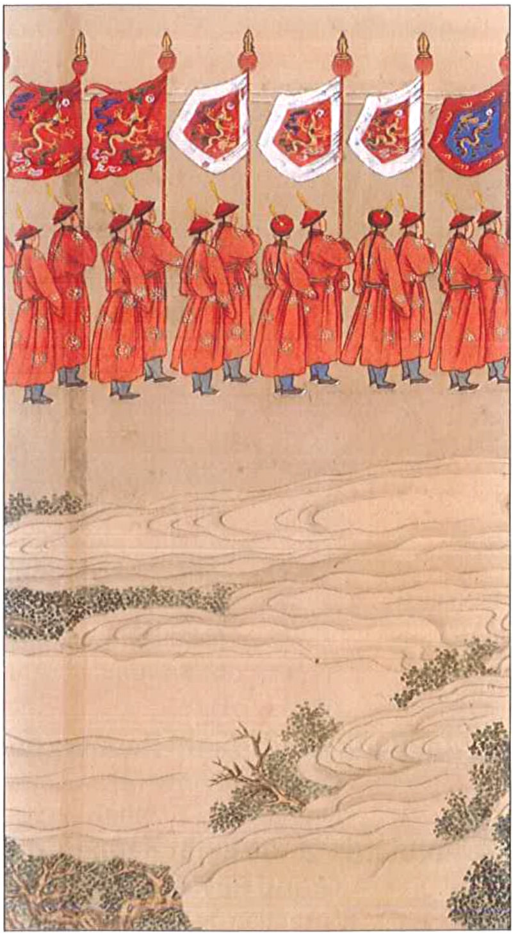


S

1. Flag of the Green Standards

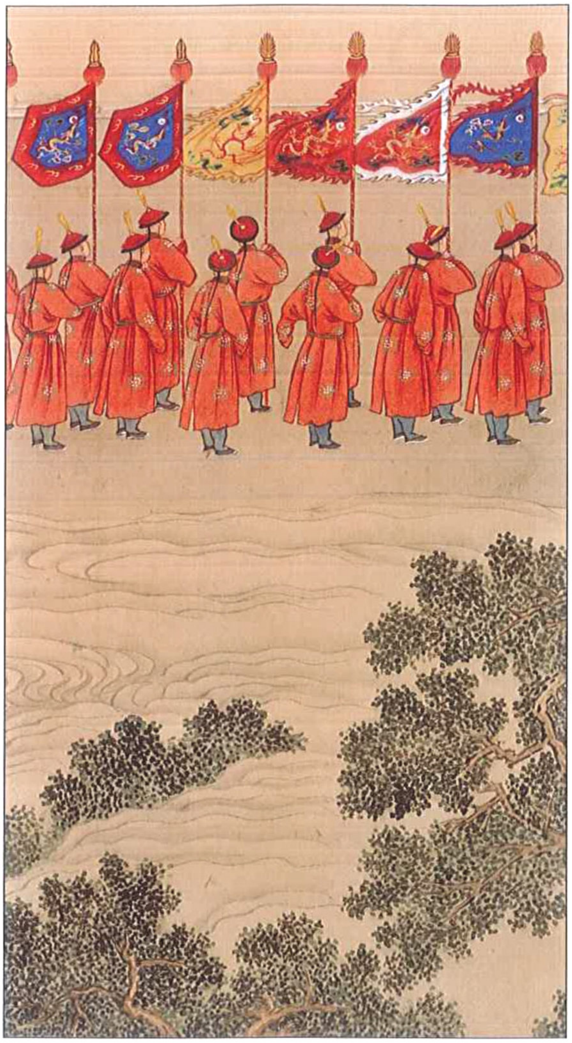
(Illustration by Sodacan)

See Colour Plate Commentaries for further information

2. Standards of the Eight Banners during Grand Review (1)

(Illustration by Xu Yang)

1



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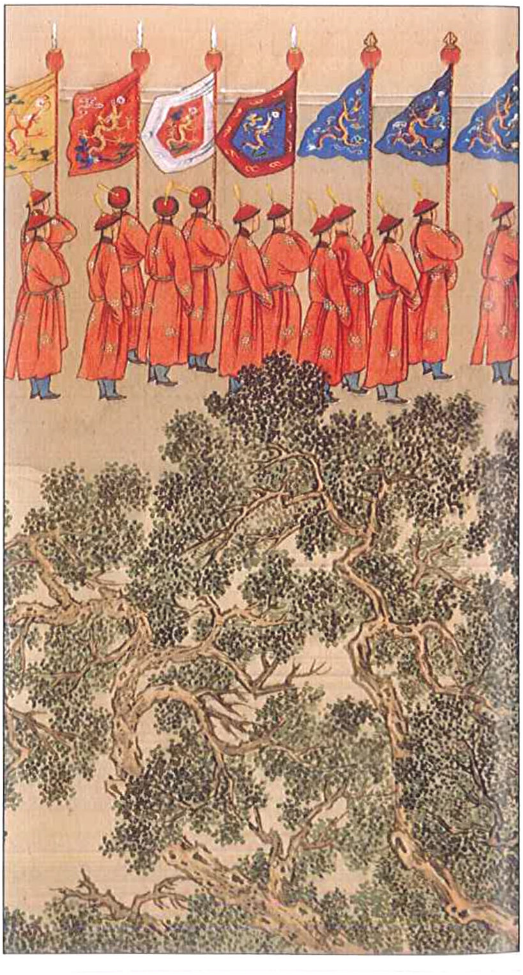


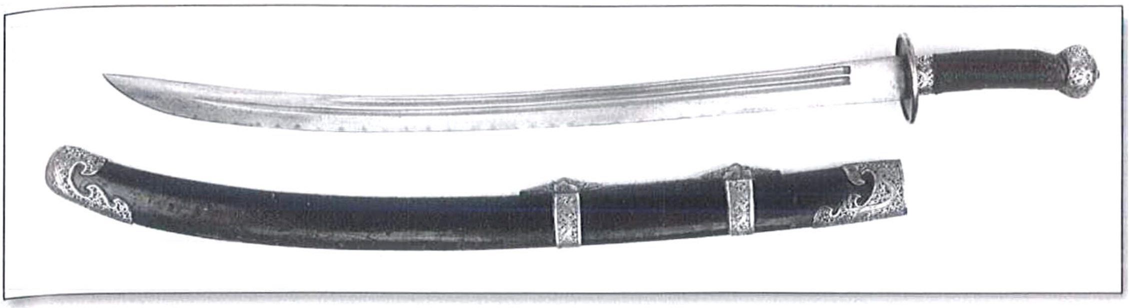
T

1. Standards of the Eight Banners during Grand Review (2)

(Illustration by Xu Yang)

2. Standards of the Eight Banners during Grand Review (3)

(Illustration by Xu Yang)



Single-edged sword of the willow-leaf type with scabbard and fittings in the rounded style and rounded chape, nineteenth century. (Peter Dekker, Mandarin Mansion)

The earliest style of scabbard with fittings was what is presently known as the 'angular style' (*fangshi*) with a quadrangular scabbard cross-section and squarely cut chape. Hilts were straight, and pommels were usually hoof shaped. This style remained ubiquitous until the mid- or late eighteenth century, when the variety of scabbard with fittings that is presently known as the 'rounded style' (*yuanshi*) appeared and gradually grew predominant. The rounded style typically had a pommel that was either hoof shaped or, soon more common, globular. Hilts changed, too, and, from the late eighteenth century, commonly curved slightly downwards.

The 1760 portrait of the Manchu Brigadier Janggimboo depicts his sword as having a gilded hoof-shaped pommel, sword guard, and squarely cut chape on a scabbard with a quadrangular cross-section. The hilt is otherwise emerald green, while the scabbard is best described as pale emerald green, no doubt a textile material or perhaps polished shark or ray skin dyed green. A deep blue cord hangs from the hilt. This type of sword was standard for imperial officers. The sword belt is deep blue with gilded metal decorations. The guardsmen on the handscroll painted by Xu Yang in 1751 have pale green sword scabbards of the same type and colour as the brigadier, except that two tufts of white hair, or perhaps white straps, hang from the scabbard on many of the swords.[22]

The illustration of Brigadier Janggimboo also shows another point already noted by the mid-seventeenth century Jesuit Martini. Although a Manchu hung his sword on his left side, like a European, he would hang it so that the point went before and the hilt faced to the rear. This was because he also carried the bow in a bow case on his left side and wished to avoid having bow and sword entangled. The soldier could then draw his sword with the right hand from behind him without needing to hold the scabbard with the other, an advantage whenever the left hand was occupied with a bow.[23] Alternatively, he could move the lower scabbard towards the rear with his left hand to bring the hilt forwards and thus allow the blade to be unsheathed with its edge facing upwards.

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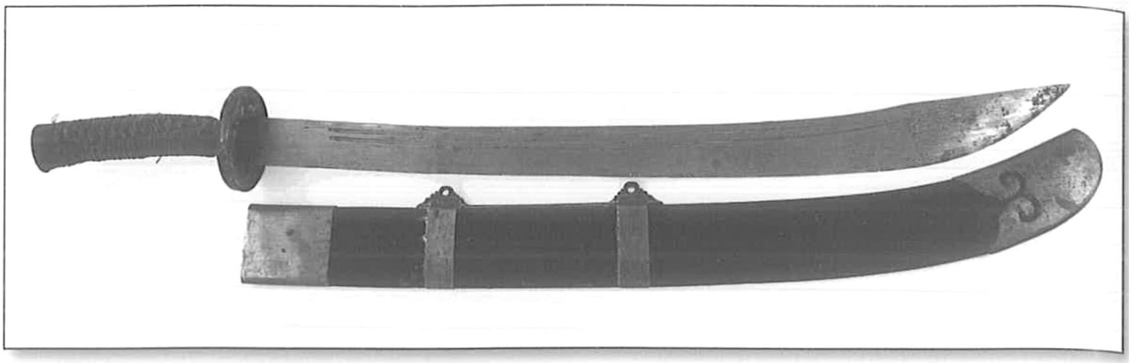
[22] Reproduced in Ebrey, *Cambridge Illustrated History*, p.226.

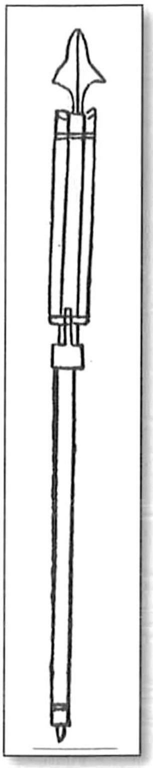
[23] Martini, *Bellum Tartaricum*, cited in Struve, *Voices*, p.51.



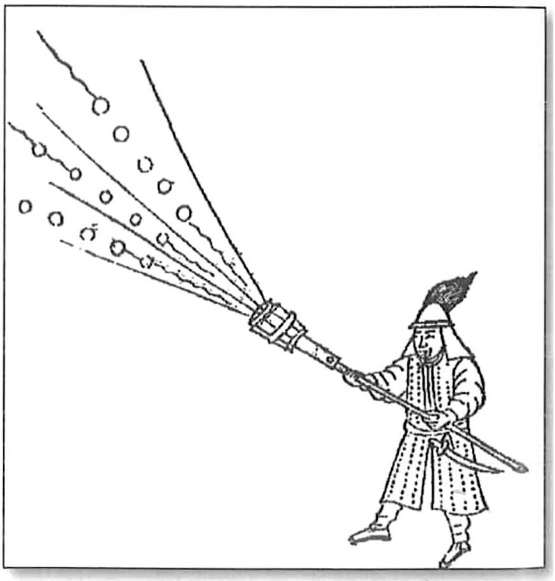
Although the currently archetypal variety of Chinese single-edged sword, this style, with a broad upward-sweeping point and presently known as an 'ox-tail sword' (*niuweidao*), emerged only in the nineteenth century and was never Qing military issue. Total length: 95cm. Blade length: 75cm. (Private collection; Author's photo)

Fire Lances

Early in the period, many Chinese soldiers still used the old-fashioned but enduringly popular fire lance (*huoqiang*, literally 'fire spear'). The weapon, which according to Qing-period illustrations continued to be in use among Mongols and other Inner Asians for a considerable time, was, in all essentials, a rocket held on the end of a pole, with its open end directed towards the enemy. It appears to have originated in the mid-tenth century.[24] The weapon consisted of a tube filled with a firework charge that, after ignition at the muzzle for perhaps five minutes, shot out flames together with smoke, small projectiles (in the early years sand, later followed by lead pellets and metal or pottery scraps, and ultimately arrows; all types of projectiles were used by the Qing period), and, at times, perhaps even poisonous gas. The weapon was used as a miniature flame-thrower but had a range of, at most, a few metres. The tube, made of any material from bamboo to metal, was mounted on a long pole, often with a spearpoint at its



Fire lance, 1585. (*Chechongtu*)



Ming fire lance in action, 1621. (*Wubeizhi*)

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24 Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.8–9, 222–23.

extreme point, so that it could also be used for close combat after its charge had been spent.[25]

Fire lances were also used in mobile racks to defend fortifications. Especially after the introduction of the matchlock musket, the fire lance was primarily seen as a protective device, used in the defence of fortifications and ships and by militia groups and indeed private merchants. As such, the fire lance was used well into the 1930s, primarily because it was cheap to manufacture.[26]

Incidentally, the fire lance was also used in Europe, where its last known appearance seems to have been at the siege of Bristol in the English Civil War in 1643.[27]

Matchlock Muskets

Guns had a long history in China, dating back to the thirteenth century. Matchlock muskets were distributed among and possibly manufactured by the Chinese-martial in Manchu-controlled Liaodong in 1622 at the latest.[28] A gun of any kind was known in Chinese as '*chong*'. When sometimes this word was reserved for a short-barrelled gun, a musket was known as '*qiang*'. At the beginning of the period in question, the most common gun was without doubt the matchlock (*niaochong* or *niaoqiang*, 'bird-gun'). Most were around 1.2m long, but longer ones did exist. A forked, A-shaped rest of Inner Asian style was commonly attached to the stock for greater ease in firing. This rest, about 0.5m long, was pivoted to a projection on the lower side of the stock. Such rests remained in use throughout the nineteenth century. A short-barrelled gun, on the other hand, might have been around 0.75m long, although there was no typical length.[29]

The matchlock was of wrought iron and plain bore. Those used by senior officers and nobles were frequently inlaid in gold and richly decorated. The matchlock typically had only a short, angled pistol stock, although some, no doubt inspired by the Indian style, had a straight stock, which was often painted, for instance, yellow or red. It was fired held against the chest, the cheek, or the right side at about hip-height. Not all matchlocks had sights. Moreover, the slow match, a cord of hemp or coir, and the need to uncover the pan with the hand before the weapon could be fired necessarily interfered with, and almost prevented, its use in wet or windy weather according to some nineteenth-century Western observers.[30] Bullets were usually small, cylindrical slugs of lead or iron rather than spherical balls and used up to six or 10 at a time. The matchlock accordingly lacked penetrative power and

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[25] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.220–63.

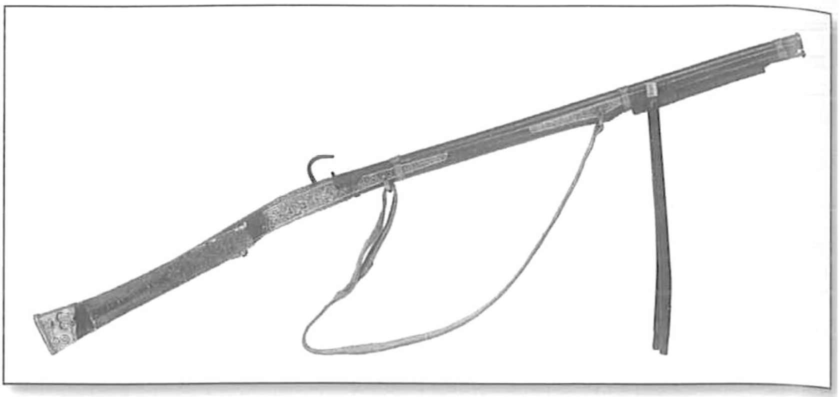
[26] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.234, 257.

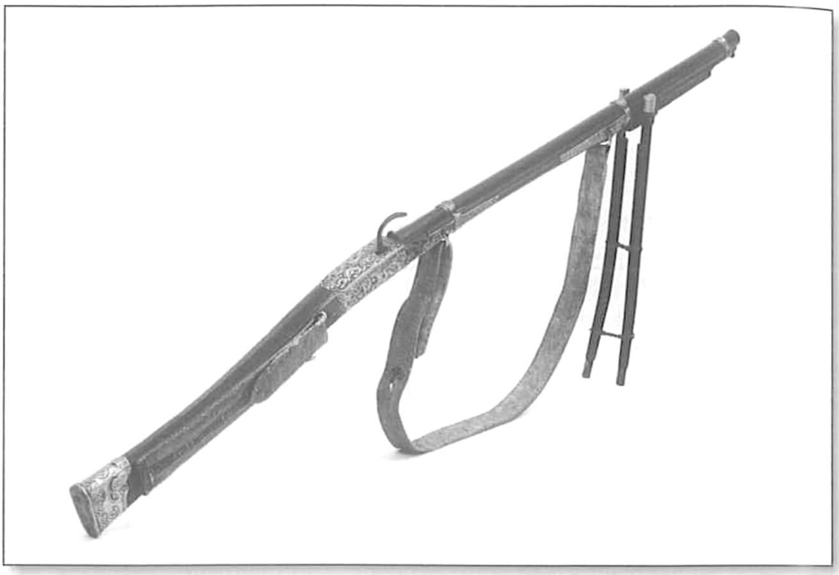
[27] Needham et al., *Science and Civilisation*, vol. 5, part 7, p.262.

[28] Di Cosmo, 'Did Guns Matter?', pp.139–40.

[29] On matchlock muskets, see Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.425–67.

[30] Ball, *Things Chinese*, pp.40–41.





Musket with forked, A-shaped rest. This particular musket is from Tibet, into which Mongols introduced the style. The A-shaped rest was used by Mongols throughout Inner Asia. Overall length: 125cm. Barrel length: 74.2cm. Weight: 2.6kg. Calibre: 14mm. (Peter Dekker, Mandarin Mansion)

was not very accurate except at close range.[31] When the matchlock was not in use, Qing soldiers, at times, used a red horsehair plug in the muzzle of the weapon to keep out dust.[32]

Gunpowder was generally carried in a wooden flask. These flasks came in a variety of shapes, including the shape of a horn. They were frequently lacquered black or red. Often, a second powder flask was carried for a finer grained powder used for the priming chamber of the matchlock. Over time, prepared charges in the form of paper cartridges or small bamboo containers that were emptied down the barrel of the musket emerged. These were either carried in the individual pockets of a cotton belt or in a box designed for the purpose, big enough to carry up to 14 or 16 charges. The bullets were carried in a separate bag. Qing soldiers commonly used neither wadding nor rammer. Instead, they struck the butt of the gun against the ground to ensure that bullets went down properly.[33] The soldier would also put the bullet into

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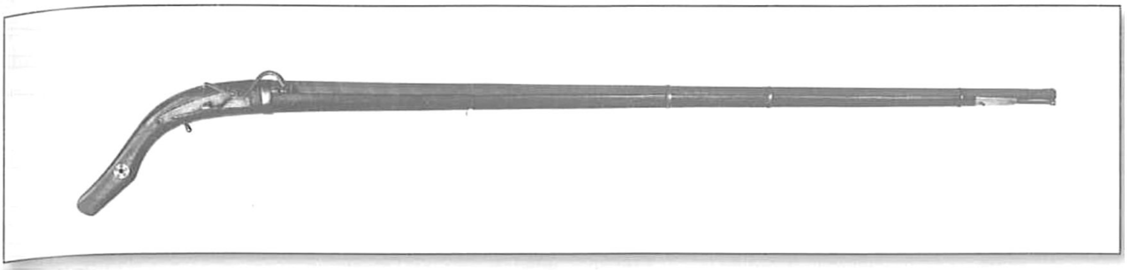
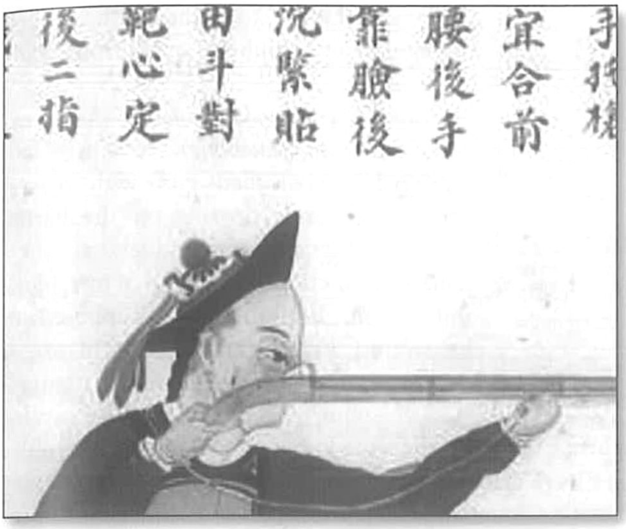
[31] Lamprey, 'Economy', p.424.

[32] Heath, *Armies of the Nineteenth Century: Asia 2*, p.58.

[33] Heath, *Taiping Rebellion*, p.42; Heath, *Armies of the Nineteenth Century: Asia 2*, pp.46–47.



Musket with pistol stock. (Peter Dekker, Mandarin Mansion)



Bannerman firing musket. (*Bingji zhizhang tushuo*, 1843)

Powder flask. Tibetan or Mongolian, possibly sixteenth or seventeenth century. Height: 26.7cm. Width: 10.2cm. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)

his mouth and wet it with saliva before he dropped it into the barrel. The moisture on the bullet made the powder adhere to it, which kept the bullet in place and made it fit the barrel closely.[34]

A somewhat unusual yet lethal problem was that many wounded soldiers who accidentally fell on their lit slow match would be killed by the fire first igniting their cotton clothing, then exploding their gunpowder containers.[35]

China boasted comparatively few competent marksmen, yet many Manchu and Mongol nobles, including several emperors, were crack shots - a skill useful when hunting. Those who wished to specialise generally preferred the bow instead. The great advantage of the matchlock was that it made more noise and, with some luck, scared the enemy. A competently handled bow was regarded as the more dangerous weapon. Among mounted bannermen, it was not unusual to see men armed with both spear, matchlock (carried on the back or, as noted, between the saddle and the horse, under one's leg), bow, and sword. The matchlock is sometimes illustrated as being fired from horseback while at full gallop, in a similar way to the bow.

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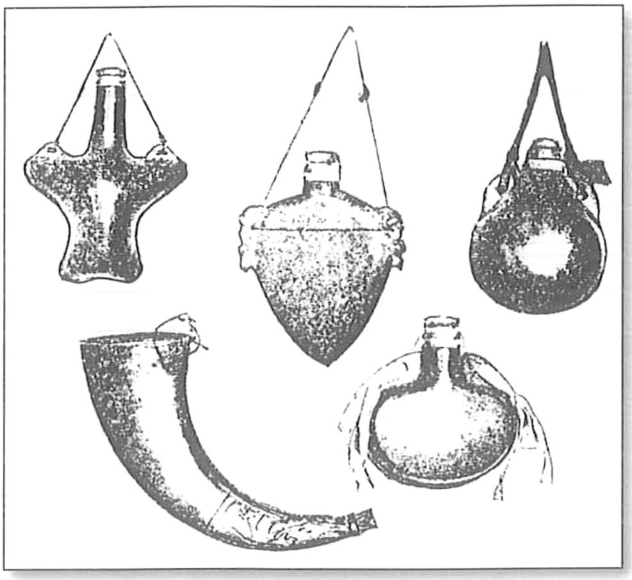
[34] Lamprey, 'Economy', p.424.

[35] Heath, *Armies of the Nineteenth Century: Asia 2*, p.70 n.27.



Qing powder flasks came in a variety of shapes, including what can be described as an inverted triangle and what looks like the upper half of a star. Conventional powder horns were in common use, too. From the collection of George C. Stone. (Anon.)

It is difficult to say when the flintlock was introduced to China. Flintlock weapons were only mentioned from the time of Macartney's embassy to the Qing court in 1793, when they were described as prone to misfire.[36] Matchlocks remained in regular use as late as the 1860s and no doubt even later among some units. In the Qing armies, the matchlock musket was superseded only by the percussion-cap and cartridge rifle in the second half of the nineteenth century, in significant numbers only from 1864 onwards.[37]

Another curious weapon was the 'three-eyed gun' (*sanyanchong*), a small and clumsy triple-barrelled gun with several reinforcing bands or ribs on the barrel, loaded with gunpowder and lead and iron pellets. It functioned as a kind of matchlock musketoon. Its range was supposed to be around 30–50 paces. It was in use at least as early as the late sixteenth century. In northern China, such weapons were reportedly much used by cavalry scouts and thus, rightly or wrongly, became known as 'signal guns'. Similar or identical weapons were also used in Korea from the sixteenth century onwards. Existing north Chinese specimen are 18cm, 34cm, and 38.5cm long. Two Korean specimens are even larger and longer, about 40cm and 50cm long and made in cast iron and bronze, respectively. There is no doubt that at least the longer multi-barrelled guns were used not only by cavalry scouts but also by entire Ming infantry units, as this tactic against cavalry is illustrated in the Manchu Veritable Records for 1619. It seems likely that even longer variants also existed, as the *Wubeizhi* of 1621 depicts another curious Chinese gun, the 'triple-victory magically effective contraption' (*sanjieshenji*), a longer musket with three barrels rotating on a central shaft so that each could be fired off in turn. A serpentine was used to bring the slow match down to the touch hole of each of the three barrels one after the other. Variants with additional barrels also existed, such as a type with five barrels.[38]

Multiple-barrelled weapons provided more firepower against cavalry, such as Inner Asian nomads, than single-barrelled weapons since all the barrels could be fired immediately. This no doubt explains why three-eyed guns were regarded as weapons of the north, where the enemy usually consisted of cavalry, rather than the south, where the enemy more often was infantry.[39]

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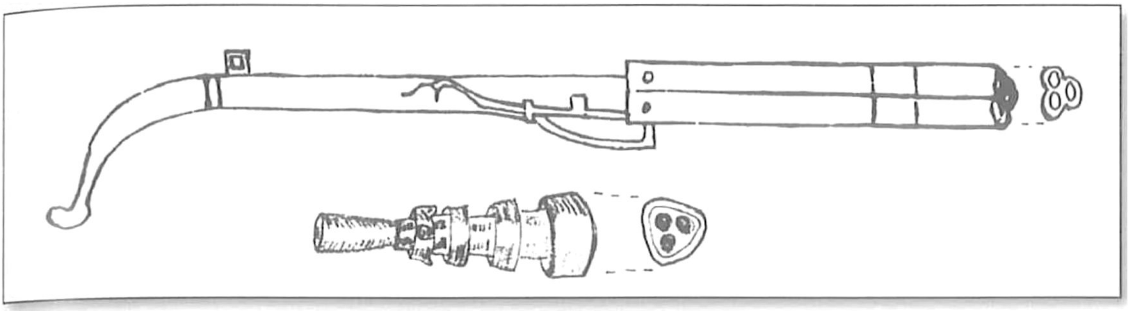
[36] Cranmer-Byng, *Embassy to China*, pp.218–19.

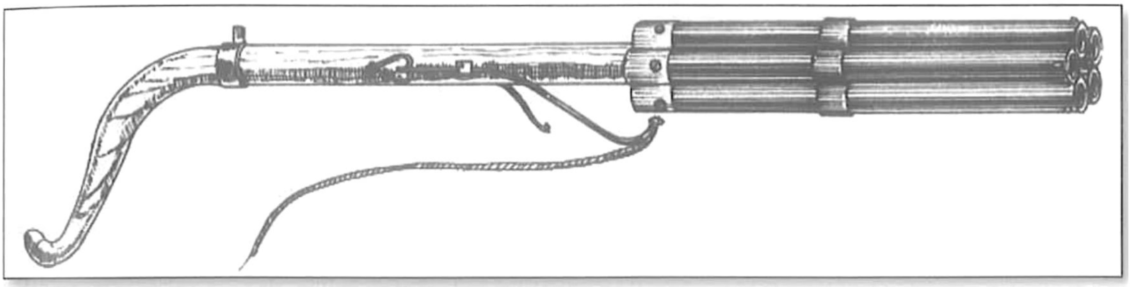
[37] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.466–67.

[38] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.331–32, 442, 455–59; Cheng Dong and Zhong Shao-yi, *Ancient Chinese Weapons: A Collection of Pictures* (Peking: Chinese People's Liberation Army Publishing House, 1990), pp.234, 236; Rob Morgan, '"In the Field as a Kitten – In the Castle as a Tiger" 1: The "Signal Gun"? A 16th Century Korean Hand-Gun', *Arquebusier*, 25:1 (1999), pp.18–19.

The triple-barrelled gun should not be confused with the triple-barrelled fire lance, which existed since the beginning of the Ming period and remained a favourite weapon with militia troops.



Two 'three-eyed guns'. (Author's drawing)



Musket with five barrels. (Anon.)

Bombs, Grenades, and Mines

China had a long tradition of using bombs and grenades. These came in numerous types, and the Manchu learnt their use from the Ming. Powder bags, containing about half a kilogram of gunpowder and fitted with a fuse, could be used for this purpose, as could more advanced bombs with metal casings that burst to scatter lethal fragments. Some were sufficiently small to enable their use as hand grenades.[40]

Most commonly used were perhaps earthenware jars, large enough to contain from about one to one-and-a-third kilograms of gunpowder. These were customarily filled with a combustible substance that was (wrongly) said to give off asphyxiating fumes when lit and accordingly dubbed 'stink-pots' by nineteenth-century Westerners:

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[39] Kenneth Chase, *Firearms: A Global History to 1700* (Cambridge: Cambridge University Press, 2003), p.148.

[40] See, for example, Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.183–89.

> They are simply earthen pots, large enough to contain from two to three pounds of powder; the opening at the top is very small, and after they are filled with gunpowder, the lids are cemented on with chunam [lime, oil, and sand mixed together], which renders the whole air-tight and impervious to dampness. Around the pot, and on the lid of it, a lot of slow match is attached ... The concussion, when it strikes, causes it to break, when the powder comes into contact with the burning match and explodes ... The powder used contains more charcoal and less saltpetre than ordinary powder, hence it explodes with less force and rapidity ... in exploding, they throw the pieces of the pot about with great force, the hot fragments inflicting severe wounds and burns on anyone within range ... The deadly smell supposed to be connected with them is all a fiction ...[41]

Even so, stink-pots were not without some effect, at least in naval warfare. During the war of 1856–1858, then Midshipman, later Admiral Sir William Kennedy found himself on the receiving end of stink-pots. He later wrote:

> The stink-pot is an earthenware vessel filled with [gun]powder, sulphur, &c. Each junk had cages at the mast-head, which in action were occupied by one or more men, whose duty it was to throw these stink-pots on to the decks of the enemy, or into boats attempting to board; and woe betide any unlucky boat that received one of these missiles: the crew would certainly have to jump overboard or be stifled ...[42]

Explosives were most widely used in siege warfare, both by attackers and defenders. Defensive mines were commonly employed in and around weak points in fortifications and, when exploded at the right moment, often caused great loss among the attackers.[43]

Cannon

Artillery has a long history in China, dating back to the mid-thirteenth century. The Ming were themselves in the process of replacing their old pieces of cannon (*pao*) with European types of guns, introduced in the sixteenth century. The Manchus acquired the new artillery early. They captured a number of Chinese (and Korean) cannon in the early wars with China, the first already at the Battle of Mt Sarhū in 1619, and Hung Taiji used these cannon from 1628 onwards. Moreover, skilled workmen were captured at Yongping in 1629, and, by early 1631, they had already cast the first 40 large cannon – more than a decade before the conquest of China. The first of these pieces, in accordance with Chinese practice named 'Heavenly-Aiding, Awe-Inspiring Great General' ('Great General': *da jiangjun*), was soon put to use in the siege of a Chinese fort. Manchu artillery was very prominent from 1644 onwards. The artillery arsenals were always under the Chinese banners.[44] Portuguese or Spanish reports from the 1640s also mention a handful, about eight or 10, European mercenary artillery officers who had gone to China from Macao to serve the Ming but ended up joining the Qing instead.[45] Due to their small numbers, however, these men were unlikely to have had a major impact on Qing artillery.

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[41] Ball, *Things Chinese*, pp.41–42.

[42] Sir William R. Kennedy, *Hurrah for the Life of a Sailor! Fifty Years in the Royal Navy* (Edinburgh: William Blackwood and Sons, 1900), p.47.

[43] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.192–203.

Artillery as used by the Qing changed little before the arrival of modern Western artillery in the nineteenth century, primarily because Qing artillery was very successful. Artillery pieces were made of brass, iron, copper, and, at times, even wood. Many were ornately decorated, sometimes to resemble dragons. Artillery was otherwise not much different from what was used in seventeenth-century Europe. Manchu and Chinese cannon were called '*hongyipao*', which, depending on the character used in the spelling of the term, means either 'red-coated cannon' (as in red cloth) or 'red(-haired) barbarian cannon'. The Manchus always used the former spelling, being somewhat sensitive to the term 'barbarian' as used by the Chinese. The first *hongyipao* reached the Ming on a European, probably Dutch, ship in 1604, and soon large cannon of this type, approximately six metres in length and 1,800kg in weight, were produced by the Portuguese in Macao.[46] The Qing, at least in the eighteenth century, customarily painted the wooden parts of the carriage red, but this had nothing to do with the name of the cannon. In the nineteenth century, gun carriages appear to have been painted red as before or alternatively left untreated. By then, fittings seem to have been painted black, although there is little firm evidence.[47]

Gunnery was highly advanced in China by the seventeenth century. This not only encompassed the casting of cannon. Explosive shells were since long well known in China and used there much earlier than in Europe. The Kangxi emperor's artillery also fired shrapnel in the war against the Oirat Mongols at the end of the seventeenth century – a weapon no doubt of great utility against cavalry.[48] Looking glasses were used in gunnery from about 1635 onwards.[49]

By 1675, the Manchu artillery consisted of 149 fully functioning cannon, most of them too heavy to bring on campaign. A Belgian Jesuit, Ferdinand

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[44] See, for example, Wakeman, *Great Enterprise*, vols 1–2, p.169; Erik Hildinger, *Warriors of the Steppe: A Military History of Central Asia, 500 B.C. to 1700 A.D.* (New York: Sarpedon, 1997), p.232. On artillery in China, see Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.276–341, 365–424.

[45] Palafox y Mendoza, *History*, p.159.

[46] Needham et al., *Science and Civilisation*, vol. 5, part 7, p.392; Di Cosmo, 'Did Guns Matter?', p.140.

[47] Red-painted carriages are already illustrated in Amiot, *Art militaire*, pl.20. In modern Chinese museum reconstructions, the metal parts of the red-painted carriage are often coloured clear blue. The provenance for this seems unclear.

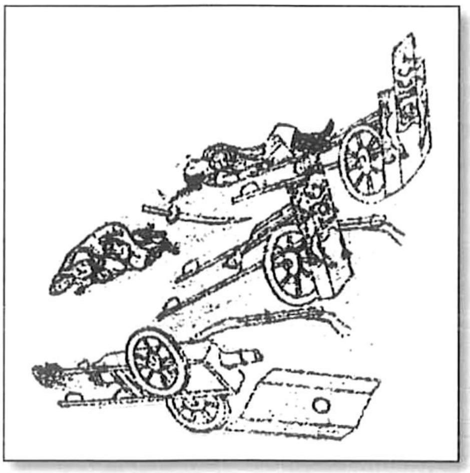
[48] Needham et al., *Science and Civilisation*, vol. 5, part 7, p.411.

[49] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.412–13.

Verbiest (1623–1688), who had been responsible for repairing the full inventory of some 300 old pieces out of which the 149 were taken, was then ordered to take charge of the manufacture of field artillery. He set up a foundry and cast 20 in the first month, then 320 during the rest of the year. Verbiest does not appear to have introduced cannon of any particular existing European type, as such were already known and in use in China. Instead, he concentrated on producing remarkably light-weight, cast-iron ordnance, suitable for field use. Among these were early experiments with 'wooden' cannon in which a light barrel was reinforced with a cover of painted wood and mounted on a carriage. Easily transportable and reasonably successful, these cannon remained somewhat weak and limited in range and calibre. Later cannon were much improved, discarded the wooden reinforcement, but still apparently weighed less than European cannon of comparable calibre. And they lasted long. Two such guns remained in use in 1860, when they were captured at Dagu (more commonly known in English as the 'Taku forts'); they were later displayed in the Tower of London.[50]

Early field artillery consisted of guns mounted on two-wheeled carriages akin to wheelbarrows, the handles of which formed the trail. This type of carriage was derived from the carriage of the Chinese rocket launcher. The wheelbarrow type often had, at least during the Ming period, a brightly painted shield positioned in front. Later field artillery had three- or four-wheeled carriages or more modern-style carriages.

Among Verbiest's cannon, the *shenwei* was a light field gun, 200kg in weight, mounted on a two-wheeled carriage. Its effective range was 200–300m, and it fired a cannonball of 0.90kg. Another type was the *shengong*, which was mounted on a three-wheeled carriage and weighed about half a ton. It fired a cannonball of 1.8kg. Yet another, even heavier type was the *wucheng yonggu*, which also was mounted on a wheeled carriage (for transportation purposes at least, one would assume) and whose weight varied between 2.0 and 3.5 tons. It fired a cannonball of 10kg. Verbiest also designed a mortar known as '*chongtian pao*', which shot explosive shells on a sharply curved trajectory.[51]



Wheelbarrow field artillery. The front piece is overturned, two crewmen are down, and a sword and two muskets can be seen on the ground. (*Taizu shilutu*)

According to some seventeenth- and eighteenth-century battle paintings, small cannon were deployed in the field simply laid out on the ground, sometimes resting on two logs. There were few means to depress or elevate the guns, except to use one or more wedges. Small cannon and jingals (see below) were also, according to the same type of paintings, used deployed on camel-back. Several such cannon were deployed together as a unit. This was a field in the use of gunpowder in which the Manchu empire and Moghul India

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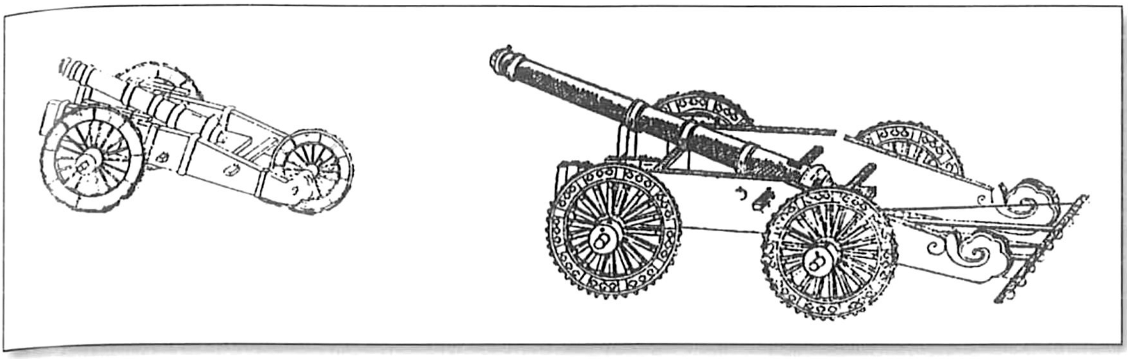
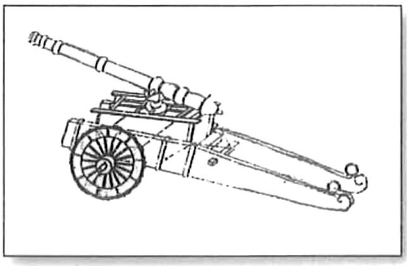
[50] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.394–98; Wakeman, *Great Enterprise*, vols 1-2, p.1110 n.81.

[51] Shu Liguang, 'Ferdinand Verbiest and the Casting of Cannon in the Qing Dynasty', in J. W. Witek (ed.), *Ferdinand Verbiest (1623-1688): Jesuit Missionary, Scientist, Engineer and Diplomat* (Nettetal: Steyler Verlag, 1994), pp.227–44, cited in Di Cosmo, 'Did Guns Matter?', p.153.

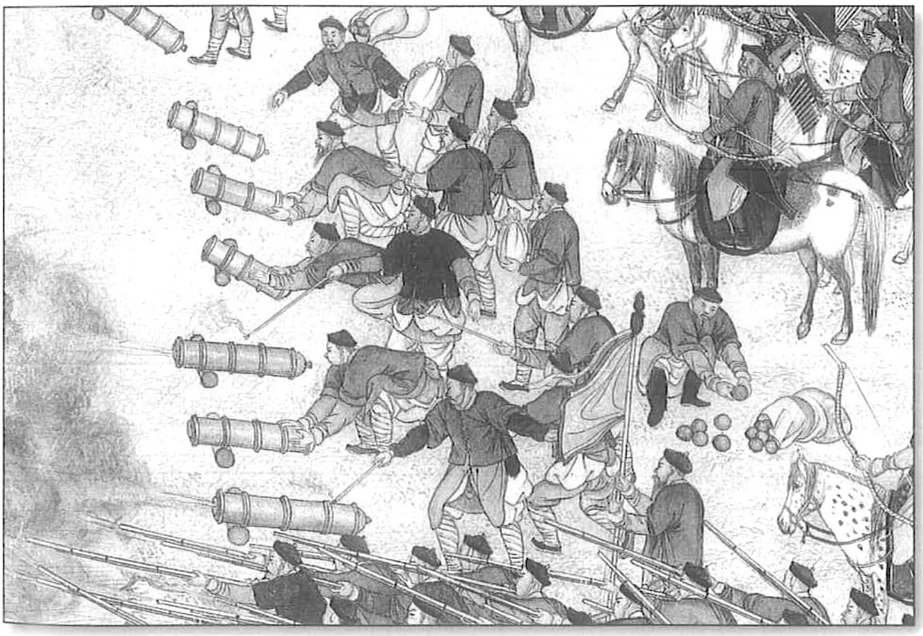


Three- and four-wheeled field artillery. The four-wheeled cannon is from 1643 and 2.64m long. The three-wheeled cannon is from 1689 and 3.62m long. (Anon.)

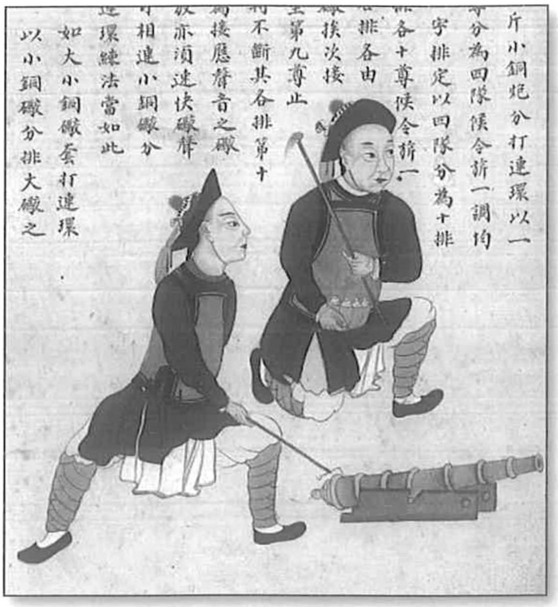


Field artillery on modern-style carriages, 1689/1690. (Anon.)

experienced a similar development and perhaps learnt from each other. Ming cannon seen in the illustrations of early seventeenth-century battle scenes also appear in 'carpenter's bench' trestle mountings. Standard Ming practice was to position a double- or single-barrelled musket with a forked stand between each field gun, and it seems likely that the Manchu, too, adopted this deployment. These illustrations, of which many have survived, indicate a very mobile use of field artillery, which appeared in yet more varieties in the early eighteenth century. This was no longer the case during the nineteenth century, when field artillery seems to have been almost invariably used from entrenched positions, prepared well in advance of battle.



Field cannon resting on logs, Battle of Lake Yashilkul, 1759. Note the banner soldiers in battle skirts. (Jean-Damascène Sallusti)



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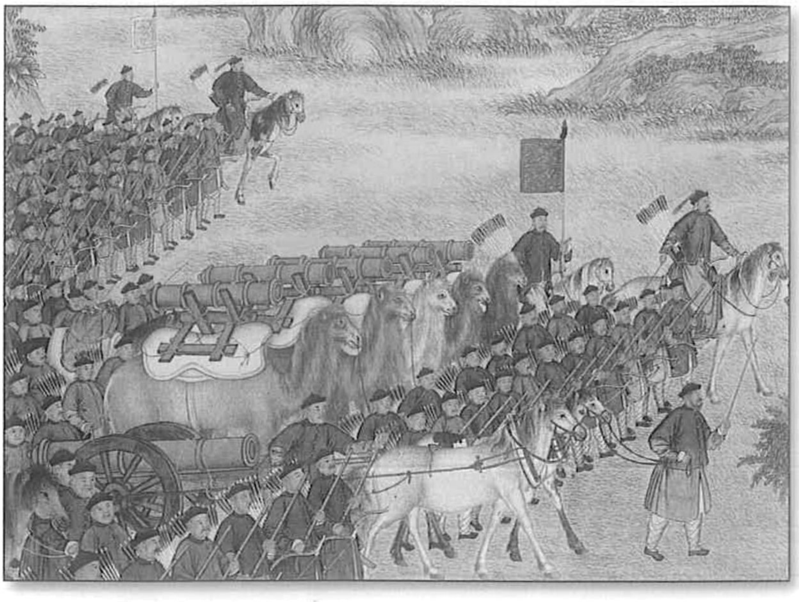
Bannermen firing a field artillery cannon resting on logs. (*Bingji zhizhang tushuo*, 1843)

Artillery including mortars was also commonly used to defend walled cities and forts. Most of these pieces were mounted on crude carriages without wheels. There were again few means to depress or elevate the guns, except wedges. Moreover, guns were usually positioned to aim at fixed points through which it was hoped the enemy would have to pass. Old cannon tended to end up as city artillery. Nineteenth-century European observers noted, to their surprise, that some cannon used on the city walls in Canton were more than 200 years old. Some efforts were made to introduce efficient heavy artillery in coastal batteries to protect against piracy, in particular in Fujian province.[52] Coastal batteries were often constructed to be almost impervious to enemy fire, and this degree of invulnerability remained even in the face of Western shipborne bombardment in the mid-nineteenth century. In such batteries, the gunners, too, were often not only very well trained but also, according to several European eyewitnesses, among them Lieutenant John Ouchterlony who took part in the Opium War, quite steady under fire.[53]



Artillery transported on camel-back and a horse-drawn cannon, 1759. While cannon certainly were transported on camel-back, they were dismounted and rested on logs while firing. (Anon.)

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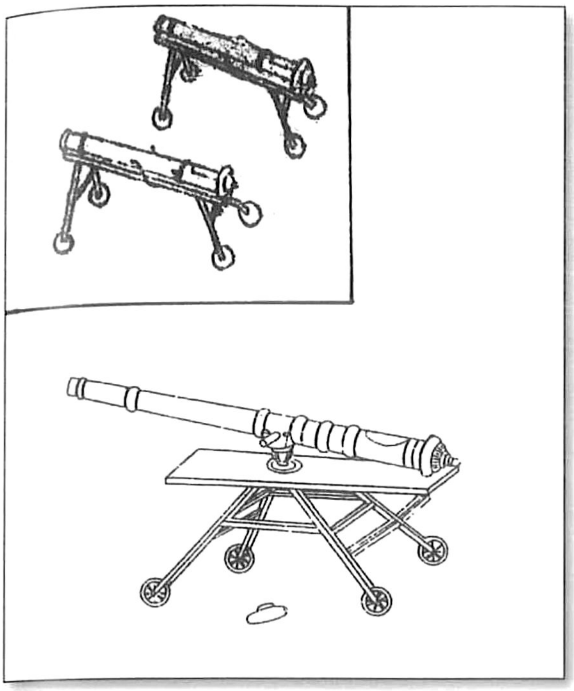
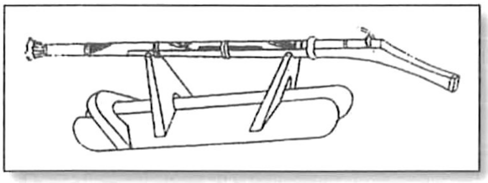
[52] Siu, *Forts and Batteries*.

[53] John Ouchterlony, *The Chinese War: An Account of All the Operations of the British Forces from Its Commencement to the Treaty of Nanking* (London: Saunders and Otley, 1844), pp.174–75, 268–69; Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.413–14.

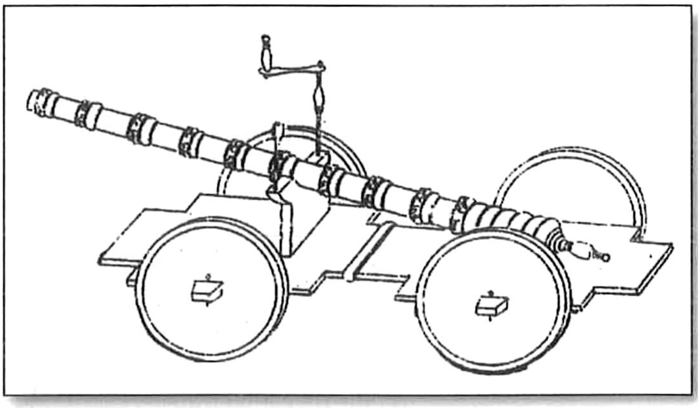




Camel-back artillery carriage for jingal, 1759. Heavy jingals could be fired while still mounted on pack camels. (Anon.)

Artillery on carpenter's bench trestle mounting, 1.84m long, 1662–1722; inset is a more primitive version from Nurgaci's reign. The light cannon in the main illustration can be regarded as a heavy jingal. Jingals employing matchlock technology were also mounted on this type of carriage, for instance, a 2.22m-long jingal dated 1727. (*Taizu shilutu*)

All cannon illustrated in the battle scenes of the seventeenth century are breech-loaders. This is in striking contrast to the evidence of nineteenth-century Western observers, who claimed that all Qing artillery in their time were muzzle-loaders. It appears likely that the practice of artillery had severely deteriorated in the previous century, as is evidenced by some nineteenth-century Western observers: 'The cannon are cast, and, although not of very uniform calibre from the mode of manufacture, are serviceable for salutes'. By then, aiming was erratic, gunpowder of poor quality, and cannonballs of uneven casting. Fire was accordingly more often than not highly inaccurate.[54]



Field artillery, 1734. (Okada Gyokuzan, *Morokoshi meishō zue* 5, 1806, from a Chinese original)

Despite such comments, artillery remained an important branch of the Qing military. During the time of the Qing, a cult came to develop around the god of artillery, Paoshen, who became an important figure in the lower echelons of the national pantheon. An army on its way to war might make roadside sacrifices to this particular god, as well as to the god of war, Guandi, with whom the Qing founder Nurgaci became increasingly associated.[55] In Mongolia, Guandi, in

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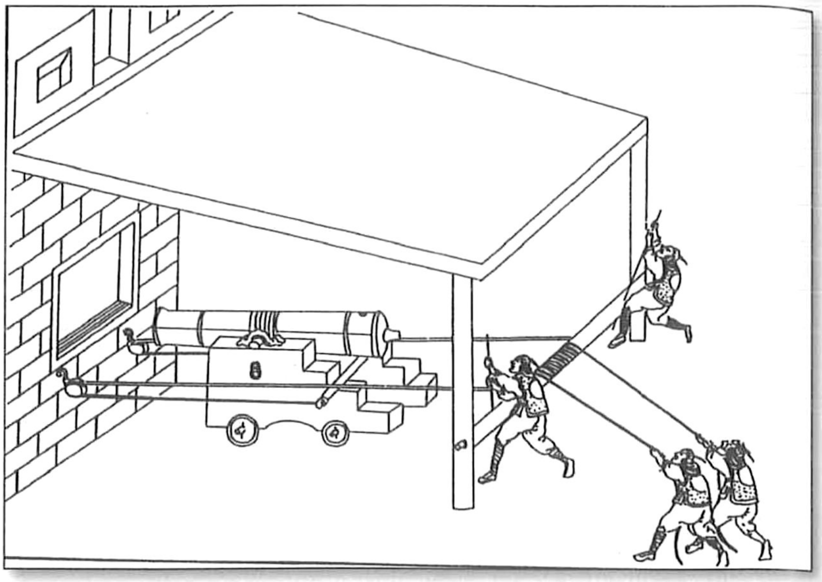
[54] Ball, *Things Chinese*, p.41.

[55] Joanna Waley-Cohen, 'Military Ritual and the Qing Empire', in N. Di Cosmo (ed.), *Warfare in Inner Asian History (500-1800)* (Leiden: Brill, 2002), p.412.

Fujian coastal artillery. (Anon.)



a similar manner, became identified with Gesar, the epic hero of Tibet and Mongolia.

Rockets

An old type of artillery was the rocket, used for battle purposes in China at least since the thirteenth century. The rockets were not explosive and no more than rocket-propelled barbed arrows or bolts. The arrowheads were frequently poisoned. Their advantage was that a single rocket launcher could fire multiple rocket-propelled arrows at one time. The bolts were placed in holes in a wooden frame, mounted on a wheeled carriage akin to a wheelbarrow. Smaller, portable, box-shaped rocket launchers could be carried by hand. The holes were drilled at an angle to increase dispersion. This made their point of impact unpredictable, which unlike ordinary artillery – whose missiles could be seen approaching and, at times, even be evaded – had a demoralising effect. Extreme range for the larger launchers may have been well over 500 paces. However, as European types of guns became increasingly common in the sixteenth century, the use of rocket launchers declined fast. Although some may have appeared in the Chinese units that defected to the Manchus, few, if any, were used by Manchu units of the early Qing army.[56]

There is, however, some evidence that rocket launchers in the early seventeenth century remained in service with the Korean army and that units of them may have served in Korean tributary contingents.

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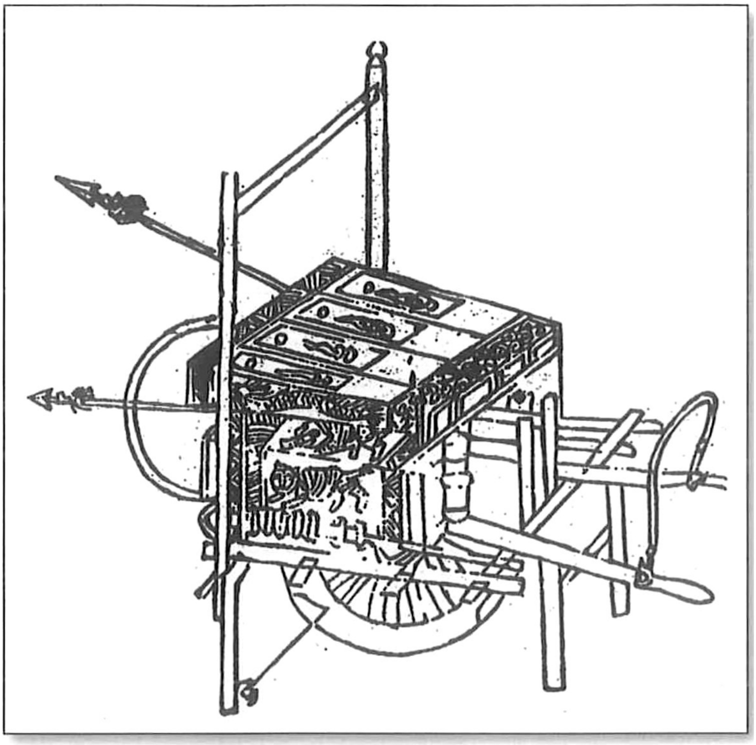
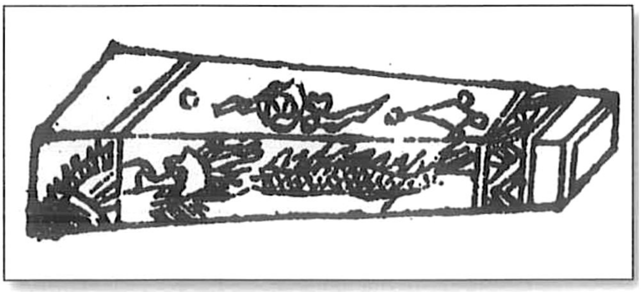
[56] On Chinese rockets, see Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.472–525.

Jingals



Rocket launcher mounted on a wheeled carriage akin to a wheelbarrow, 1621. (*Wubeizhi*)



Portable rocket launcher, 1621. (*Wubeizhi*)

The most important form of light artillery or infantry support weapon in the Qing army was the jingal, in its most common form an extremely long and heavy matchlock musket. A large number of these guns would be attached to most infantry and many cavalry regiments. 'Jingal' (or 'gingal') was the English name for the *taiqiang* (the word 'jingal' may be derived from the Arabic *al-jazâ'il*, a heavy rifle fired with a forked rest).[57] This was a long, heavy, tapering, large-bore (approximately 2.5–3.8cm) matchlock originally said to have been introduced by the Manchus. Jingals crewed by two men were distributed among and possibly manufactured by the Chinese-martial in Manchu-controlled Liaodong in 1622 at the latest, at a ratio of one jingal to eight matchlock muskets.[58] The jingal's barrel was commonly 2.1–3.1m long, although shorter ones (1.8m) as well as jingals as long as about 4.3–4.9m have been mentioned by contemporary observers. A jingal of the smaller variety weighed from 18kg to 27kg.[59]

There was also another type of jingal, heavier and constructed in a different way. We have already seen such a heavy jingal on a carpenter's bench trestle mounting from the period 1662–1722. This type of weapon, at first and occasionally later referred to as '*fulangji*' (a word of uncertain lineage but generally interpreted as 'Frankish cannon'), was instead a breechloader. This kind of cannon first reached China in the early sixteenth century. The upper half of the breech-end of the barrel was open and designed to receive a pre-loaded and primed breech-piece. The breech-piece was simply dropped in place, then secured by turning it half round by means of a handle. After the gun was fired, the breech-piece was turned back and removed, after which another pre-loaded breech-piece was put in and the gun was again ready to fire. Several, at least three, such breech-pieces would be used in turn. The crew would normally consist of three men: two men who fired the gun and a third who loaded and primed the breech-pieces. Being heavier, this type of jingal was always mounted on a tripod or some other kind of stand.

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[57] Henry Yule and A. C. Burnell, *Hobson-Jobson: The Anglo-Indian Dictionary* (Reprint of 1902 2nd edition, Ware: Wordsworth, 1996), pp.373, 474.

[58] Di Cosmo, 'Did Guns Matter?', pp.139–40.

[59] Heath, *Armies of the Nineteenth Century: Asia 2*, p.47.

The jingal was crewed by from two to five men and fired from a rest. The oldest type of jingal-rest was the four-wheeled stand of the aforementioned type. A later development was the tripod, known from at least 1727. Another possibility was often a man's shoulders. A jingal was commonly borne on the shoulders of two men and fired by a third. Two-man jingals were, when ready to be fired, handled by the front-rank man grasping hold of the middle of the barrel as it rested in the hollow of his right shoulder while the rear man took aim and pulled the trigger. In the north, a jingal was occasionally fired resting between the humps of a kneeling camel, which in addition transported the weapon.[60] Jingals were also employed in naval warfare, set in the bulwarks of boats. Its shot weighed between 0.1kg and 0.9kg. The shot was smaller in diameter than the bore but often contained one large and several small bullets, or up to four bullets, with a large charge ('a good handful') of gunpowder.[61] The jingal was the Chinese gun least liable to burst, and it was common to load with an extra allowance of gunpowder. Its range was about 1,000m for the larger varieties and roughly half that for the smaller ones, although the jingal's aiming mechanism was very poor or even nonexistent.[62]

The *Wubeizhi* of 1621 depicts a long gun, slightly more than 1.3m long, attached to a handle slightly over 0.5m long and bent in a scroll-like curve, which may have been an ancestor of the jingal. This gun, known as the 'large blowing-away-the-enemy lance-gun' (*da zhuifeng qiang*), was operated by two soldiers using a tripod support. It had a blunderbuss muzzle and fired a lead ball weighing 20g with a range of more than 200 paces.[63]

The Chinese also experimented with organ guns, a framework incorporating eight or 10 jingals, fired either simultaneously or in succession.[64] These would have been particularly useful for defensive purposes during sieges, such as when massive firepower was needed to counter an enemy assault.

Even some cavalry units fielded jingals. Tripod-mounted cavalry jingals were, during field operations, carried slung between two horses, so that the stand trailed along the ground, or when dismantled, with the jingal carried on one horse and its stand on another. The jingal crews dismounted to fire their weapons.[65]

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[60] Heath, *Armies of the Nineteenth Century: Asia 2*, p.70 n.30.

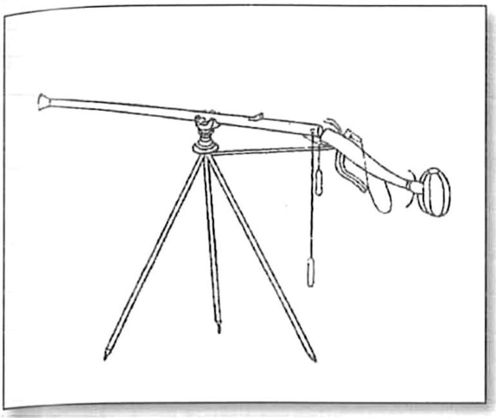
[61] Ball, *Things Chinese*, p.41.

[62] See, for example, Ball, *Things Chinese*, p.41.

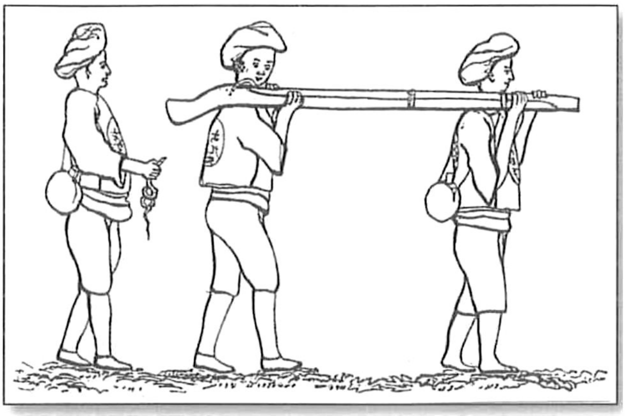
[63] Needham et al., *Science and Civilisation*, vol. 5, part 7, pp.455–59.

[64] Heath, *Taiping Rebellion*, p.23.

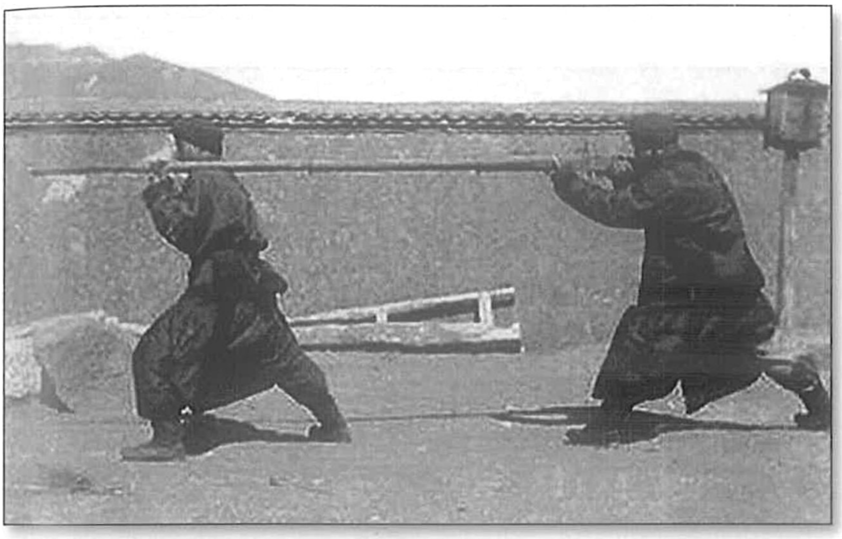
[65] Heath, *Taiping Rebellion*, p.21; Heath, *Armies of the Nineteenth Century: Asia 2*, pp.31, 48.



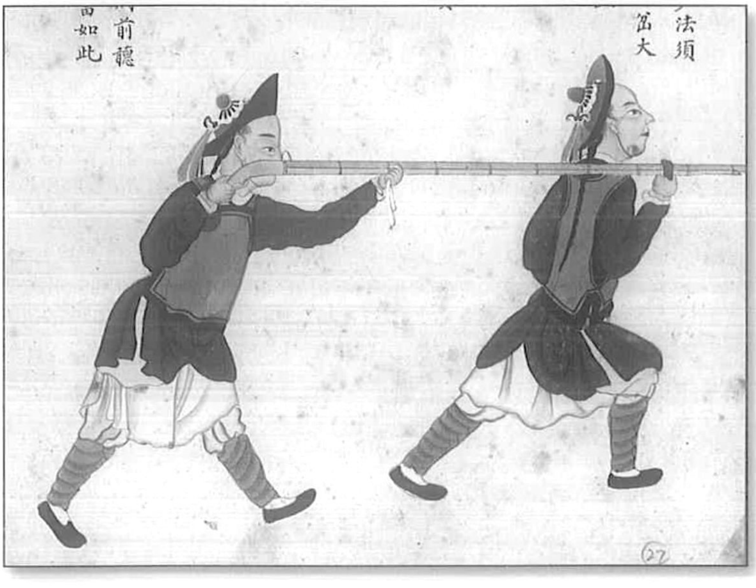
Jingal with tripod. (Anon.)



Jingal borne on the shoulders of two men and fired by a third. (Jones Lamprey, 1867)



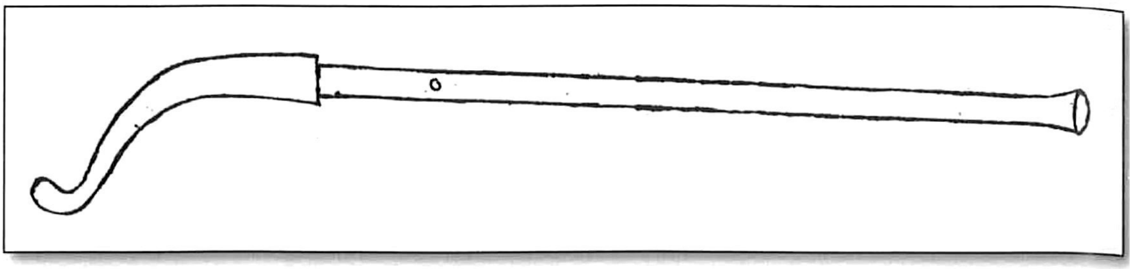
Jingal borne on the shoulder of one man and fired by another. (Anon.)



Bannermen firing a jingal borne on the shoulder of one man and fired by another. (*Bingji zhizhang tushuo*, 1843)

Naval Artillery

At sea, the Chinese made great use of cannon, as well as fire lances, stink-pots, and other assorted mines and bombs. A typical Fujian province war junk, by the late 1590s, carried one heavy cannon, one mortar, six large culverins, three falconets, and 60 fire lances, as well as smaller firearms. As the Qing assumed control over the Ming coastal fleets, we may assume that similar war junks were used by the Green Standards naval forces.[66]



A first prototype of the jingal was possibly the 'large blowing-away-the-enemy lance-gun', here depicted in 1621. (*Wubeizhi*)

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[66] Needham et al., *Science and Civilisation*, vol. 5, part 7, p.408.

5

Uniforms and Weapons of Reserve, Militia, and Local Forces

Militia Uniforms and Weapons

A militiaman wore his normal civilian clothes including his ordinary baggy cotton trousers, a cloth girdle serving as belt, cotton stockings, and shoes, as well as a waist-length protective military jacket made of closely stitched double-quilted cotton and (particularly in the north) a cap made of quilted cotton bearing an identification band, with protective flaps for the ears and neck. The colour of the caps was used to distinguish between different territorial units and followed the pattern of the regular army. Blue, red, white, black, and dull brownish yellow caps were used. Clear yellow, the imperial colour, was avoided.[1] All militia soldiers were dressed in garments of common civilian colours, in particular various shades of indigo blue, grey, black, brown, and white. Most militia soldiers in the south appear, instead of caps, to have worn coolie-hats or helmets of bamboo. These were sometimes painted.

Militia units were armed with a selection of long spears, broad single-edged swords, double-edged swords, halberds and other polearms, cudgels, bows, and matchlock muskets. Another curious weapon used by militia groups was the already-described 'three-eyed musket' (*sanyanchong*), the triple-barrelled matchlock musketoon-like gun loaded with gunpowder and lead and iron pellets.

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[1] Huang, *Complete Book*, p.476.

Braves

We have seen that, in times of unrest, the Chinese provincial elite might acquire official permission to raise their personal units of Chinese volunteers to fight rebels. Such men were irregular mercenary soldiers commonly known as 'village braves' or only 'braves' (*xiangyong* or *yong*) by the character written on the circular badge on the front and back of their jackets.[2] Except the character on their circular badge, these men looked little different from other Chinese soldiers. Their military jackets were of a uniform colour, generally edged with another colour. An example out of many possible variations were red jackets, bordered with black velvet, worn together with loose blue, black, or apricot-coloured trousers.[3] Other colour combinations were just as likely. A brave generally wore a turban, often of a standard colour within his unit, with his queue wound round the head beneath it. Alternatively, he might wear a conical hat of rattan or bamboo.

Coolies and Non-Combatants

All armies, except some cavalry armies in the north, relied on large numbers of Chinese non-combatants, most serving as coolies (from the word '*ku li*', literally 'bitter strength'). Coolies and other labourers wore only the thigh-length cotton gown (*shan ku*) with a pair of loose-fitting trousers. In summer, many labourers went bare to the waist. Coolies invariably wore straw sandals, if they had any footgear at all, and frequently straw or bamboo hats.

Mongol Tribal Cavalry

The Manchus frequently called up non-bannerman Mongols, each usually armed with a lance, bow, matchlock musket, and sword, to serve in the Qing armies. They were regarded as ill-disciplined but good warriors. Mongols were not required to but usually wore the same hairstyle as the Manchus. Clothing generally consisted of a tanned leather and sheepskin coat, baggy trousers, Manchu-style boots, and a cotton gown, usually dark blue. Other common colours were brown, dark red, and dark purple. Only the somewhat pointed fur hat in several varieties, although invariably of animal skin with the fur side turned in, distinguished them from most Manchu bannermen. At times, Mongols wore round, usually brown, blue, or maroon, cloth caps instead but probably not in cold weather or when on campaign. Some Mongols wore light armour. However, especially early in the period, many or even most of the Mongols allied to the Manchus did not have suits of armour. This is, for instance, made clear in a document from 1629 that refers to a joint campaign against the Chakhar Mongols undertaken by Khorchin Mongols, who lacked suits of armour, and Manchus, who had them.[4]

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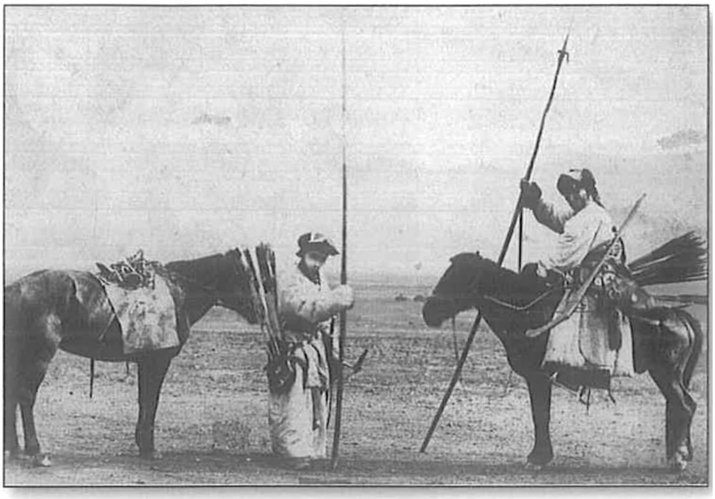
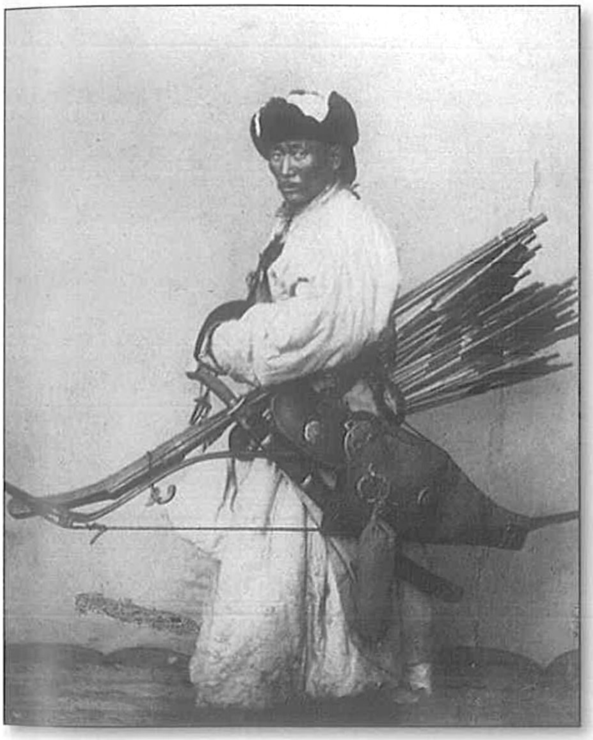
[2] See, for example, Ball, *Things Chinese*, p.43.

[3] Isabella L. Bird Bishop, *Korea & Her Neighbours: A Narrative of Travel, with an Account of the Recent Vicissitudes and Present Position of the Country* (London: John Murray, 1898), vol. 1, p.246.

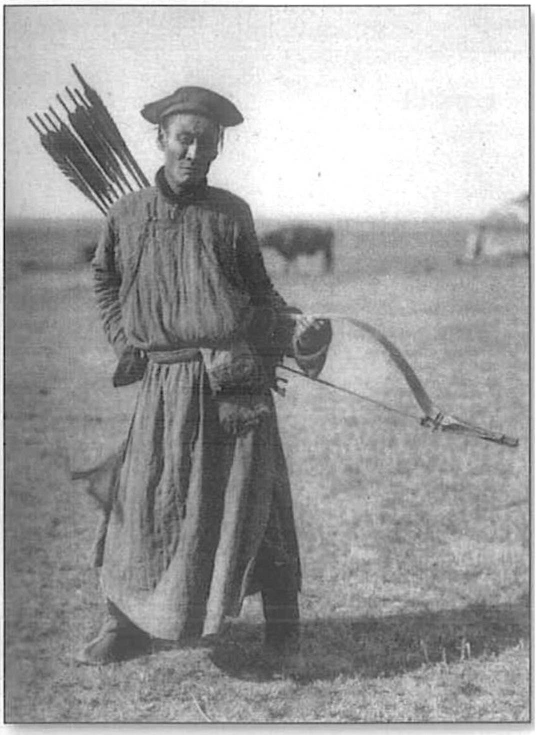
Furthermore, Mongols remaining on the steppe had considerably fewer matchlocks than those in Qing service. Steppe-based Mongols occasionally fielded small numbers of serfs, slaves, and others as not very reliable infantry.



Mongol cavalrymen in winter garments, armed with spear, bow, and musket, c. 1900. A staged photograph, displaying traditional Mongol dress and equipment but with an incorrectly strung bow. (*Bibliothèque nationale de France*)



Mongol in winter garments with bow, matchlock musket, and sword, c. 1900. Although a staged photograph, he wears traditional Mongol dress of the type in use during the Qing period. However, the bow is incorrectly strung, probably with a too-long string. (*Bibliothèque nationale de France*)



Mongol in summer garments, 1940s. Although a staged photograph, he wears traditional Mongol dress of the type in use during the Qing period. As headgear, he wears a battered version of the Qing round winter hat with upturned brims, characteristic of soldiers. The bow looks like a genuine Qing-period bow, but it is unbalanced, with one limb unstrung or broken, while the arrows seem to be tied together with a cord for display purposes. (Anon.)

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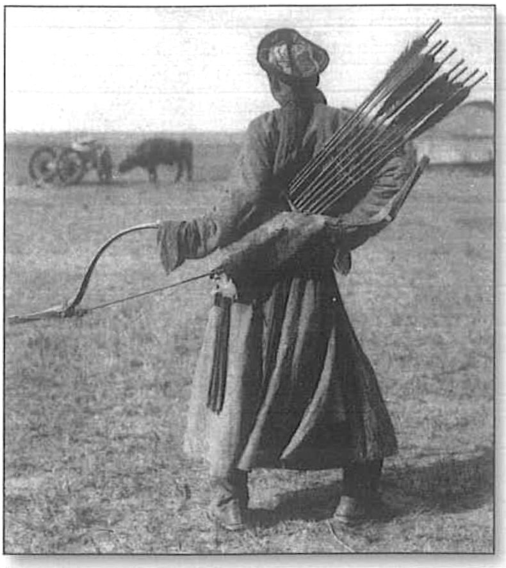
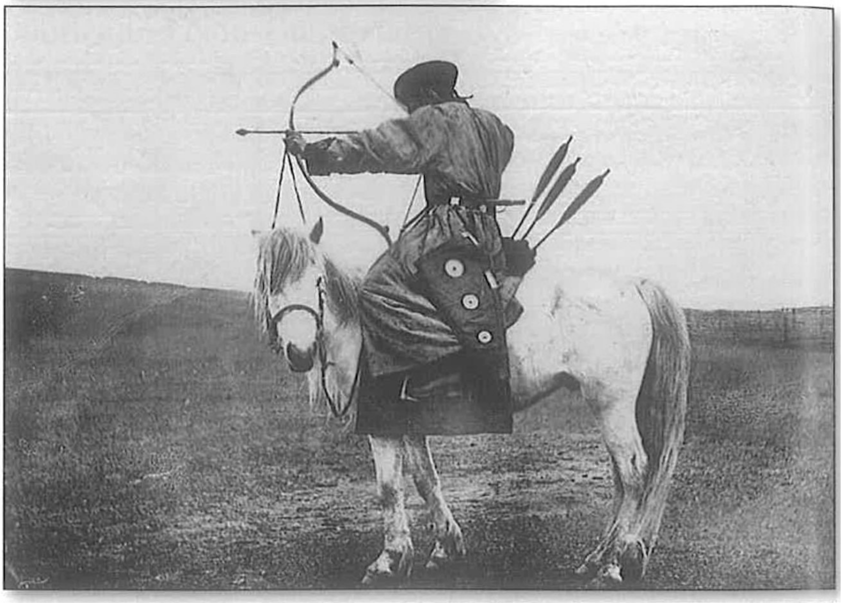
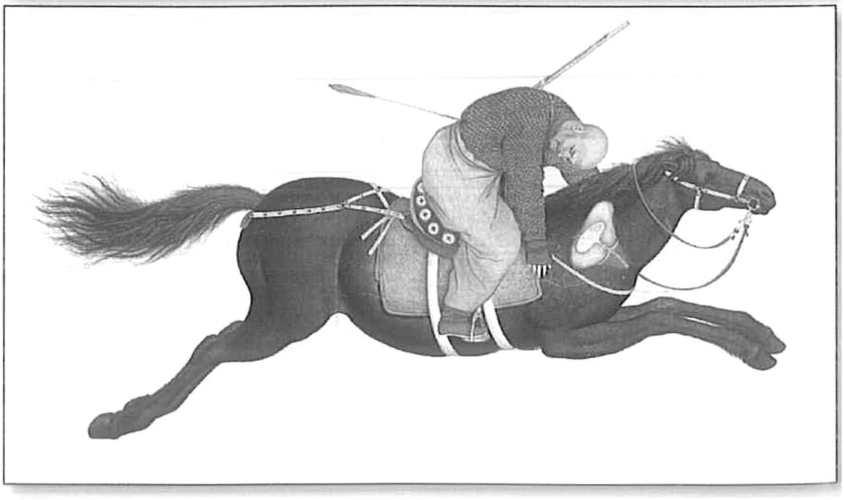
[4] Di Cosmo and Bao, *Manchu-Mongol Relations*, p.159.



A second photograph of the previous Mongol.



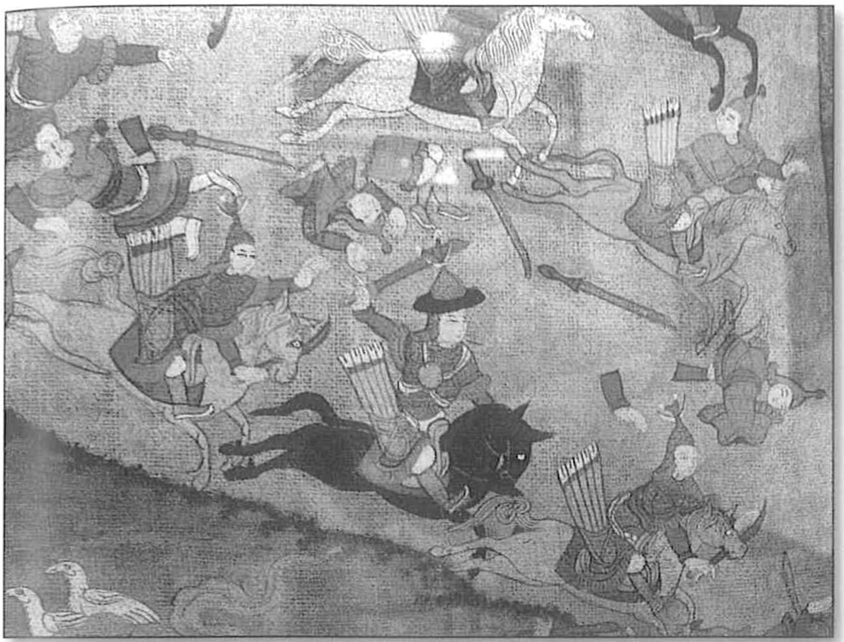
Buryat Mongol mounted archer, c. 1900. Buryat bows tended to be shorter than comparative Qing bows, with shorter ears that do not protrude forwards when the bow is strung. (Anon.)



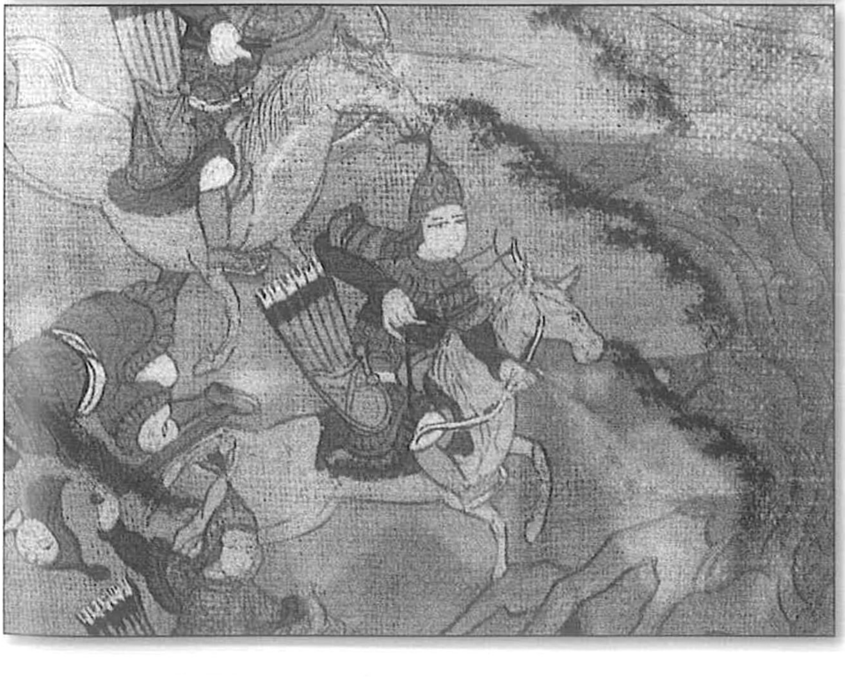
Turkestani mounted lancer with matchlock in characteristic pointed fur hat (falling to the ground) and chainmail over a quilted coat and quilted upper trousers (*shalbar*), slumping in the saddle when shot by Qing hero Ma Chang during a breakthrough and long pursuit during the 1759 Battle of Qurman. It took three arrows to finish him off. Although not a Mongol, this lancer is often mistaken for one because of the similar garments. (Giuseppe Castligione, 1759)

Tibetan Militia and Local Forces

Tibetans employed by the Qing outside Tibet, as noted, more commonly served as constabulary than regular troops. They accordingly had little of the armour that, up to 1793, characterised Tibetan nobles and their retainers at home and may in fact have been quite similar in appearance to the tribal Mongol light cavalry frequently hired by the Qing. Many were probably recruited from the nomadic or semi-nomadic tribes in barren parts of Tibet, unlike the settled regions that provided Tibetan regular units.



Tibetan cavalry, seventeenth to eighteenth century. (Nineteenth century painting, *Musée Guimet*, Paris)



Tibetan horse archer, seventeenth to eighteenth century. (Nineteenth century painting, *Musée Guimet*, Paris)

Before the Manchu-initiated Tibetan military reform of 1793, Tibetan cavalrymen were armed with sword, lance, and bow. No doubt many cavalrymen also carried a matchlock. The horses they rode were small, however, not much bigger than ponies. Tibetan infantrymen were armed with sword, matchlock or bow, and sometimes a spear. Most were merely dressed in grey sheepskin robes, fur hats, and leather boots. Some were levied serfs. Nomadic herdsmen on foot may have carried slings. Other nomads served as light horsemen. Infantry might ride yaks as a means of transportation. Most domestic yaks were black in colour, and they were controlled by means of a rope attached to a large wooden ring through the cartilage of the nose.

Tibetans generally wore long hair, at least shoulder-length and twisted into a short plait adorned with an ivory ring at the top and with a narrow cloth band running through it, into which decorations such as turquoises or corals were set. Monks, including the fighting monks (*ldab ldob*) who served the major monasteries, quite frequently participated in battle, and they often wore ordinary civilian clothes and shaved their heads fully. Following the Tibetan military reform of 1793, regular soldiers adopted the Manchu queue, at least until the mid-nineteenth century. Nomads could have almost any kind of hairstyle, wound around the head, worn in butter-smeared fringes or bangs at the front, or simply hung loose about the shoulders. Other nomads, especially those in military service, wore the Manchu queue. Some shaved their heads entirely.[5]

Clothing typically consisted of a long, baggy woollen robe, usually in one of a variety of hues of grey, with very long sleeves that covered the hands fully. The robe, which crossed over the breast from left to right and, for commoners and soldiers, reached to the knees, was gathered up by a belt. In winter, many wore sheepskin or goatskin jerkins either under or over the robe. Not everybody wore trousers, and underwear was rare. Tibetan soldiers commonly wore knee-length boots that consisted of a thick sole of undressed yak leather or camel hair and a felt or textile upper, often dyed red or purple. The boot was secured under the knee by coloured bands. Tibetans wore hats in a wide variety of styles. Among commoners, clothing was usually filthy and greasy and often in rags. Many nomads wore sheepskin gowns instead of the woollen robe. Jewellery was scarce, but many Tibetans wore a circular silver or gold earring in the left ear, from which further decorations might be suspended.[6]

As noted, Tibetan regular soldiers trained in the Qing manner wore the Manchu queue and, at least up to the mid-nineteenth century, had Chinese-style uniforms. In the first half of the nineteenth century, these might include blue jackets, reportedly with the usual white, circular badge on breast and back but, in this case, with the characters '*fanbing*' (frontier-subject soldier) already referred to.[7] By the late nineteenth century, it was reported that Tibetan soldiers usually no longer wore Chinese-style uniforms, although some wore black jackets.[8]

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[5] Heath, *Armies of the Nineteenth Century: Asia 1*, p.156.

[6] Heath, *Armies of the Nineteenth Century: Asia 1*, pp.156–57, see also the excellent pictorial reconstructions of Tibetan soldiers on pp.160–64. However, note that Heath's figures on pp.116–17 are based on staged photographs of non-soldiers in obsolete pieces of armour and do not correspond to real Tibetan soldiers. See Fredholm von Essen, 'Impact of Manchu Institutions'.

Tibetan Weapons

Tibetans were traditionally armed with bows, spears, matchlock muskets, jingals, and single-edged swords. Slings were also used, at least among nomads. The Imperial Ordinance for the More Effective Governing of Tibet, first drawn up by Fukang'an in 1793, stipulated that 50 percent of the Tibetan regular soldiers would be matchlockmen, 30 percent archers, and the remaining 20 percent armed with swords. Observers noted, however, that some men continued to be armed with long spears or slings.[9] Some weapons were manufactured in Tibet, but Fukang'an had noted that the Qing army in Tibet had a considerable surplus in the form of especially bows and arrows brought from China. He thus decided to allocate Qing surplus weapons to the Tibetan soldiers. Fukang'an also noted that there never had been any cannon in Tsang (perhaps a faulty conclusion, as there had been at least one cannon in Tibet in 1727; whether this ever reached Tsang remains unknown), so he also allocated two of his 13 cannon (used against the Gurkhas) to the Tibetan units in Tsang.[10] The remaining 11 cannon he stored in the Potala Palace in Lhasa.[11]

The Qing army of Fukang'an had to transport all lead shot and gunpowder from China, primarily Sichuan, since production facilities in Tibet were inadequate or nonexistent. Fukang'an therefore proposed to establish the manufacture of gunpowder at Kongpo, where there were rich sulphur deposits and where some gunpowder for the use of the Potala apparently already was produced. However, he expected that lead shot and slow match still would have to be transported from Sichuan.[12]

Matchlock Muskets

Firearms, in the form of matchlocks, would seem to have reached Tibet from the west and south. They were first recorded as being used in Ladakh, to the west, in the reign of King Senge Namgyal (seng ge rnam rgyal, r. c. 1590–c. 1640). Since he conquered the kingdom of Guge and much of western

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[7] Wade, 'Army of the Chinese Empire', p.340.

[8] Das, *Journey to Lhasa*, p.180.

[9] See, for example, Das, *Journey to Lhasa*, p.180.

[10] Petech, *China and Tibet*, pp.117–18.

[11] Chen, *Qing Court's Troop Deployment*, citing Fukang'an's memorial to the throne dated the eleventh day of the Twelfth Month of the fifty-seventh year of the Qianlong reign period, which corresponds to early 1793.

[12] Chen, *Qing Court's Troop Deployment*, citing Fukang'an's memorial to the throne dated the eleventh day of the Twelfth Month of the fifty-seventh year of the Qianlong reign period.

Tibet and did not hesitate to give away at least 25 matchlocks to a religious leader, we can assume that matchlocks soon were in reasonably common use throughout Tibet as well, although extant records would seem to be lacking.[13] In Bhutan, to the south, the earliest recorded use of gunpowder and firearms occurred in 1634 during the Tibetan intervention in the Bhutanese civil war. The Tibetans sacked a Bhutanese monastery, which then suddenly exploded, killing the invaders. It has been suggested that gunpowder was left there by Portuguese Jesuits.[14] It is recorded that the first ruler of a unified Bhutan, Shabdrung Ngawang Namgyal (zhabs drung ngag dbang rnam rgyal, 1594–1651) received matchlocks, cannon, and gunpowder from a Portuguese emissary in 1635–1636, and these weapons were indeed believed to have been a key advantage in his subsequent military victories over the Tibetans.[15]

Matchlocks were also used on horseback, in the same manner as a bow, even while riding at a full gallop. Displays of mounted marksmanship of this kind were performed during festivals. The first recorded instance of this custom was the celebrations held in 1694 to mark the completion of the Potala Palace, Lhasa, when both mounted archers and mounted matchlockmen galloped past the same target, shooting at it.[16]

The Tibetan matchlock (*me mda'*, 'fire-arrow') consisted of metal parts usually of Chinese manufacture, but, unlike the Chinese gun, the stock was straight and inspired by the Indian style. Another difference in appearance was that the Tibetan stock was often covered with wild ass's skin stretched tightly and sewed on. Tibetan guns varied in length, being from about 0.9–1.5m long. They were generally fitted with the A-shaped, forked rest of Inner Asian origin, 0.9m long or more. Tibetan (and for that matter other Inner Asian) rests were thus generally longer than those used by Manchus and Chinese. The prongs were usually made of two different materials, the upper half being wood and the lower half often actual horn, of either antelope or gazelle. It was not unusual to fit a red pennon to one or both prongs of the forked rest, which would then be folded up against the fore-stock with the ends (usually but not invariably) projecting forwards beyond the muzzle of the gun, in a similar way to a bayonet. The pan cover was a leather flap fastened to the left side of the stock and held down by a tag hooked over a pin on the right side. On the right, outer side of the butt of the stock of a Tibetan matchlock was often affixed a long, narrow rectangular leather pouch (known in Tibetan as '*bir shubs*') in which a spare match cord could be stored.[17]

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[13] LaRocca (ed.), *Warriors*, pp.199–200.

[14] John A. Ardussi, 'The Rapprochement between Bhutan and Tibet under the Enlightened Rule of sDe-srid XIII Shes-rab-dbang-phyug (r. 1744-63)', *Journal of Bhutan Studies*, 1:1 (Autumn 1999), p.65 with note. Identical incidents took place as late as during the Younghusband expedition into Tibet in 1904, including one in which a lighted match was dropped by a soldier on the first floor of what, unbeknownst to him, was a gunpowder magazine. Allen, *Duel in the Snows*, pp.144–45, 227.

[15] LaRocca (ed.), *Warriors*, p.200.

[16] See, for example LaRocca (ed.), *Warriors*, pp.199–200.

[17] Stone, *Glossary*, pp.443–44; LaRocca (ed.), *Warriors*, pp.205, 281.

To use a matchlock in the field, the soldier had to carry various accessories. The lead balls, or shot, were carried in a pouch of usually relatively stiff, but not hard, leather. The gunpowder for the main charge was carried in a flask made of hard leather. The usually more finely grained powder for the priming pan was often carried separately in a small carved horn. Some Tibetans used a bandolier worn over one shoulder and across the chest, attached to which were a number of individual gunpowder containers, each sufficient for one shot, as well as the leather pouch for shot and a horn for priming powder. Shot were cast of lead in small soapstone moulds, some of which were sufficiently small to be carried in a leather case attached to one's waist belt.[18]

Although many matchlock barrels used in Tibet are believed to have been imported from China or sometimes India, at least one is known to have been made in Tibet, so we can assume that production facilities existed there as well. However, the details of this particular gun barrel still suggests that it was the work of an Indian or Indian-trained gunsmith, probably working in Lhasa during the eighteenth or nineteenth century. Many matchlocks were also made in Nepal and then imported into Tibet, indeed so many that there would seem to have been special words in Tibetan for matchlocks made in India (*lcags sbugs*, 'iron tube') and Nepal (*bal mda'*), respectively.[19]

By 1727 at the latest, Tibetans also employed jingals, probably of the same type as the Manchus used, and some artillery (to be precise, a single cannon).[20] There is reason to believe that the Tibetans learnt the use of the jingal from the Oirat Mongols, who in turn had adopted them from Muslim polities in contact with the Safavids of Persia. In Tibet, the jingal became known as '*dzambur*' (*'dzam bur*), which presumably derived from the Safavid term '*zambūrak*' (little wasp).[21]

Swords

Tibetan swords (*gri*, *ral gri*, or *dpa' dam*) were typically straight and single-edged, less than one-metre-long weapons with hilt and frequently scabbard, as well mounted with embossed steel or silver, in the latter case often set with coral and turquoise. Cheaper scabbards were made of leather-covered wood and generally had a metal chape.[22]

The sword could be carried in three possible ways. Many Tibetans appear to have carried the sword through the sash at the front of the body, with the edge turned upwards in an almost horizontal position, thrust across the wearer's front from right to left. Others wore it hanging from the left hip, suspended by two straps mounted on the scabbard from a waist belt. In Bhutan, the sword was, at least from the nineteenth century, hung from the right hip but vertically, from a single metal lug on the upper front part of the scabbard.

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[18] LaRocca (ed.), *Warriors*, p.199.

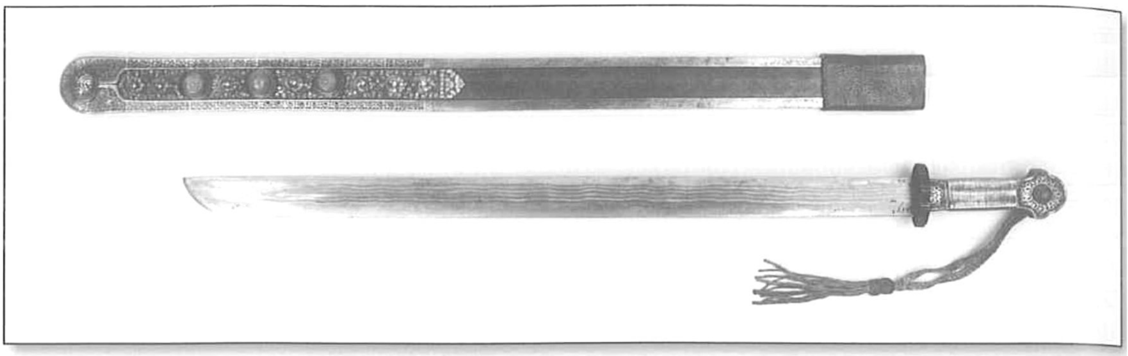
[19] LaRocca (ed.), *Warriors*, pp.208, 280–81.

[20] Petech, *China and Tibet*, pp.116 (jingals), 117–18 (artillery).

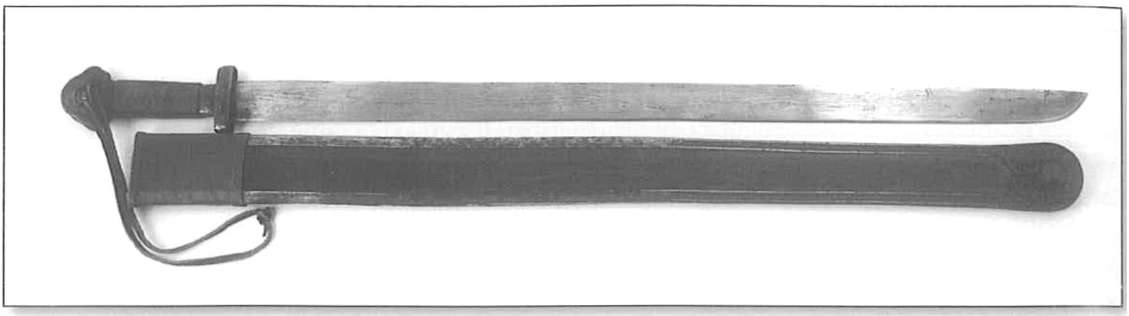
[21] Hosung Shim, 'The Zunghar Conquest of Central Tibet and Its Influence on Tibetan Military Institutions in the 18th Century', *Revue d'Etudes Tibétaines*, 53 (2020), p.108.

[22] On Tibetan swords, see also LaRocca (ed.), *Warriors*, pp.146–73.

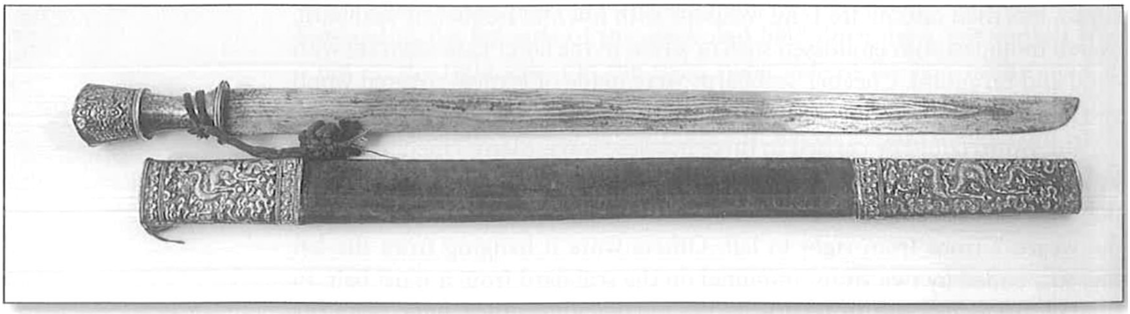
Swords were not only used by soldiers. A sword was, for instance, regarded as an essential part of male dress among the Khampas of eastern Tibet (Kham or Khamdo).[23] Many Khampas reportedly purchased swords from Bhutan.[24]



Single-edged straight Tibetan sword with hilt and scabbard mounted with embossed steel or silver set with coral and turquoise. (Peter Dekker, Mandarin Mansion)



Single-edged straight Tibetan sword with leather-covered wooden scabbard protected by iron rails, with grip and upper part of scabbard bound in red leather. Total length: 87cm. Blade length: 82cm. (Private collection; Author's photo)



Single-edged straight Khampa sword made in Bhutanese style. Total length: 59.5cm. Blade length: 48cm. (Private collection; Author's photo)

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[23] LaRocca (ed.), *Warriors*, p.146.

[24] Phuntsho Rapten, 'Patag: The Symbol of Heroes', *Journal of Bhutan Studies*, 5 (Winter 2001), p.99.

Spears

A Tibetan spear (*mdung*) of quality typically had a wooden shaft reinforced with a spiraling coil of iron wrapped around much of its length, usually as much as 0.6–1.2m below the spearhead. Often, the spear also had an iron ferrule with a short spike at the base of the shaft. The spearhead could be double-edged like a sword or quadrangular like an elongated spike.[25] Cavalrymen carried long, slender lances, the shaft being from 3.1m to 3.7m in length below the spearhead, which extended another 0.3m. Cavalry lances came with a strap that enabled them to be slung on the back. In comparison, infantry spears were only about 1.65–1.8m long.[26]

Bows

Tibetan bows (*gzhu*) came in different types, ranging from simple wooden bows to composite bows. Arrows (*mda'*) were made of cane or bamboo. Until the seventeenth century at the latest, the then lamellar-clad armoured cavalryman of Tibet used a quiver in the form of a long, narrow container, with an open cowl at the top and a flared or triangular base. The arrows were stored in the quiver with the fletchings at the bottom and the arrowheads at the top. Very similar types of quivers had, by then, been used by Inner Asian nomads and cavalry armies for centuries. In time, possibly already in the fifteenth century but perhaps more likely in conjunction with the introduction of Bhutanese styles of armour in the seventeenth century, a 'new' type of quiver appeared. This was broad and flat, and the arrows were held side by side, with the arrowheads and the first third of the shafts inserted into the quiver. The origin of the new type of quiver remains unclear; similar quivers were used in modern-day northern China in the fifth century and in Inner Asia in the thirteenth century. The Manchus, for that matter, used the same style no later than in the first half of the seventeenth century (but not, perhaps significantly, in 1609, when Wang Qi drew the aforementioned picture of a Jurchen horse archer (reproduced above)). The bow case was almost closed at the bottom and covered about one-half of the bow. Later bow cases were completely open at the top and bottom.[27] The importance of archery in old Tibet, that is, before the Qing period and the introduction of gunpowder, is evidenced by the literary metaphor for arrow, which was 'chief of weapons' (*mtshon cha'i gtso*).[28]

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[25] LaRocca (ed.), *Warriors*, p.174.

[26] Heath, *Armies of the Nineteenth Century: Asia 1*, p.158. On Tibetan spears, see also LaRocca (ed.), *Warriors*, pp.174–84.

[27] On Tibetan bows, see LaRocca (ed.), *Warriors*, pp.187–97. For earlier examples of the 'new' type of quiver (in thirteenth-century Ilkhanid Persia), see, for example, David C. Nicolle, *Arms and Armour of the Crusading Era, 1050-1350* (White Plains, NY: Kraus International Publications, 1988), pp.706–07. Even earlier examples have been attributed to the Toba Wei (AD 386–534) of northern China (Stephen Selby).

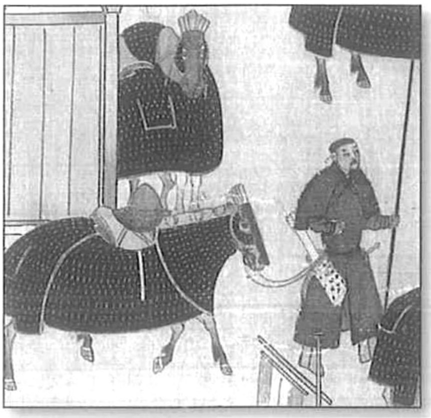
[28] LaRocca (ed.), *Warriors*, p.275.

Slings

The Tibetan sling (*sgu rdo* or *'ur rdo*), used by herdsmen and nomads, was about 2.1m long and made of a square-braided cord woven of a mixture of wool, yak or horsehair, and felt with a broad pocket of woven material in the middle to hold the slingshot and a loop, through which the thumb was placed, at one end. The slinger held the other end between thumb and forefinger. Effective range was reportedly more than 20m. On horseback, a Tibetan might use his sling in place of a whip. Herdsmen in particular used the sling as a whip when driving sheep or cattle. Among nomads, both men and women knew how to use the sling and always carried one.[29]

Tibetan Lamellar Armour of the Pre-Gunpowder Period

As noted, before Tibet was subjugated by the Manchus, the key component of the Tibetan army was the heavily armoured cavalry consisting of nobles and their retainers. To understand how they were armed and equipped, one should remember that the general perception of Tibetan arms and armour stems from only two principal sources: the specimens, usually of the lamellar type, brought out of Tibet since the 1880s by diplomats, sinologists, and missionaries and the photographs taken in Tibet in the first half of the twentieth century.[30] The specimens are most useful for the historian. Most surviving armour parts, all made of lamellar, whether of iron or rawhide lamellae, derive, judging from their style as well as a number of radiocarbon datings, from the early to mid-fifteenth to the mid-seventeenth century.[31] However, such armour was, for centuries afterwards, only used in religious ceremonies, so the photographs eventually taken only show men dressed up for cult rituals who did not have any real knowledge on how this kind of arms and armour were used in war.[32]



Complete suit of lamellar armour, as recorded in *Eighteen Songs of a Nomad Flute: The Story of Lady Wenji*, an early fifteenth century Chinese painted scroll. Note that the soldier left his helmet on the saddle. (Metropolitan Museum of Art, New York)

In the very beginning of the period under consideration, before Tibet was subjugated by the Manchus, the heavily armoured cavalrymen usually wore lamellar armour (known in Tibetan as *'go cha, khrab'* or, more precisely, *'byang bu'i khrab'*) and often rode horses almost as heavily armoured as they themselves. Tibetan lamellar armour consisted of a long coat, constructed of upwardly overlapping, horizontal rows of brightly polished iron lamellae joined together by an intricate system of leather doeskin lacing, left in its natural cream colour. Armour consisting of upwardly overlapping lamellae was characteristic of horsemen since it protected particularly well against weapons wielded by infantry on the ground.

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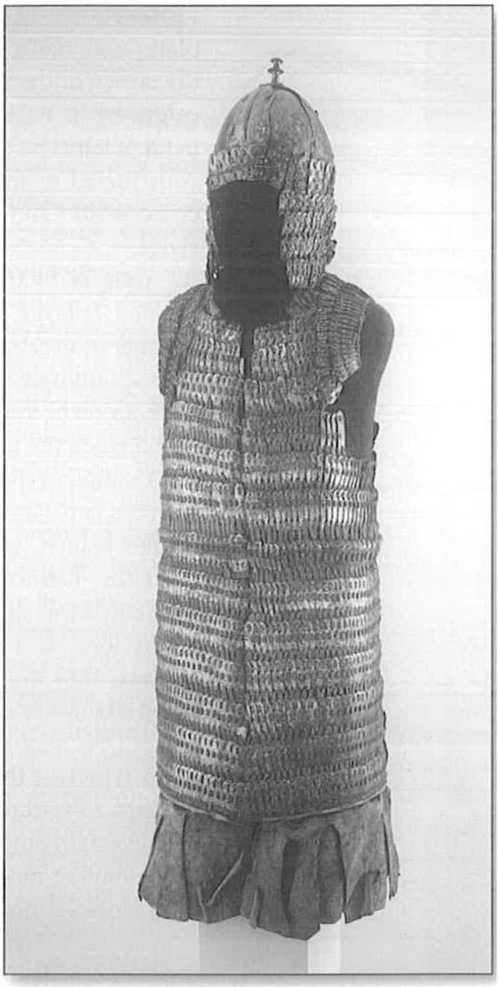
[29] Stone, *Glossary*, pp.254–55; Heath, *Armies of the Nineteenth Century: Asia 1*, p.158; LaRocca (ed.), *Warriors*, p.280.

[30] Donald J. LaRocca, 'Rediscovering the Arms and Armor of Tibet', in D. J. LaRocca (ed.), *Warriors of the Himalayas: Rediscovering the Arms and Armor of Tibet* (New York: The Metropolitan Museum of Art/New Haven, CT: Yale University Press, 2006), pp.3, 10.

[31] LaRocca (ed.), *Warriors*, pp.6 and 96 with references, 116, 288.

[32] Fredholm von Essen, 'Impact of Manchu Institutions'.

Flaplike, often detachable shoulder defences were laced to the coat of armour. The shoulder defences varied in length according to the number of laminations. Some reached to the wrist and laced up on the inside. Other Tibetan suits of armour had leather extensions from elbow to hand, laced to the shoulder pieces, and closely studded with embossed circular washers. The coat opened down the front, and the long skirt had two further openings provided towards the rear of each hip so that the rear portion of the skirt was spread over the horse's crupper when the wearer was mounted on horseback. The lower edge of the skirt was customarily decorated with sections of buckskin or leather fringes or with panels of brocade upon leather. Panels of brocade upon leather could also be attached to the edges of the shoulder defences. The coat was joined over the shoulders by straps permanently laced to the shoulder defences. These straps were constructed of small lamellae, usually cut down from older, larger ones, laced together and lined with leather.[33]



Tibetan lamellar armour and helmet. The armour is incomplete since it would be worn with separate lamellar shoulder defences, likely an armoured belt, and possibly armoured sleeves. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)

A simpler type of Tibetan armour consisted of a leather coat with old lamellae merely laced to the surface, with panels of printed cotton fabric mounted on leather fastened to the edges. Specimens of both simple and more elaborate Tibetan armour have been preserved in British museums, including the Royal Scottish Museum, the Royal Armouries, and the Victoria and Albert Museum. Yet another simple form of lamellar body armour, reaching to about mid-thigh, was constructed of two panels joined over the shoulders and open at the sides. The lower edge was extended with additional flaps of buckskin. The coat was secured around the body with a belt. A specimen is found in the National Museum of Ethnography, Stockholm.

In either case, additional pieces, for instance, arm guards made of leather strapped with thin, decorated strips of iron, were usually added to the basic suit of armour.

The common Tibetan helmet of this period is often, due to its shape, referred to as an 'eight-plate helmet'. It was round, built up of eight overlapping radial plates laced together with leather thongs. The plates were typically arranged so that half their number were external and half internal.

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[33] This section is based on Robinson, *Oriental Armour*, pp.161–62. See also Stone, *Glossary*, pp.51–53; LaRocca (ed.), *Warriors*, pp.51–95, 116–25, 138–43.

Each external plate overlapped an internal one on each side. The external plates each had a medial rib and were cusped between the lacing holes. On the crown of the helmet was a moulded knob or iron crest-tube laced to the centre by its base plate. The lower edge of the helmet was finished with a band of lamellae to which, in turn, were laced cheek and neck defences, each constructed of three rows of lamellae. Alternatively, cheek and neck flaps could be of Chinese brocade, lined with iron plates held by gilded-headed rivets.

Another, by this time, apparently less common type of helmet was what is often referred to as the 'multi-plate helmet'. It was built up of a large number of overlapping arched plates, lames, each of which was pierced by a correspondingly large number of lacing holes. The upper ends of the lames were, in turn, overlapped by a slightly convex disk, often with a crest-tube, that formed the top of the helmet.[34]

A simpler type of helmet was made with cheek and neck flaps of leather, with old lamellae merely laced to the surface. There was also form of genuine leather helmet, which imitated the appearance of the eight-plate helmet.[35] For either helmet style, we can assume that a quilted conical skullcap with chin cords was worn under the helmet.

As long as Tibetans used armour, and perhaps even later in certain regions, they also used shields (*phub*). These came in various types and materials. Most common was perhaps the flat or domed wicker or cane shield (*sba phub*), which seems to have been of Tibetan origin. The other main type was the leather shield (*ko phub*), made of lacquered buffalo or perhaps rhinoceros hide but with an iron boss. This type was of ultimately Indian origin but, in Tibet's case, perhaps derived from Nepalese, Sikkimese, or Bhutanese models. Shields were invariably round. The large flat type of cane shield, with a peaked iron boss in its centre from which a series of iron struts often radiated, may have been particularly common in western Tibet and Ladakh. Both domed and flat cane shields had a single handgrip in the centre of the interior side. The leather shields, following Indian style, generally had at least four small metal bosses, often of brass, on the exterior covering the hand-loop rivets and a fifth that was purely ornamental. These served to anchor the handgrip. Such shields sometimes had an arm strap as well on the interior.[36] They may have been imported from Bhutan, where such shields were customary.[37] By 1792, at the very end of the period of Tibetan armour and shields, one kind of infantry shield was described as being made of wood, 0.46m wide and 1.1m deep, and painted with pictures of tigers ornamented with different coloured feathers and an iron rim.[38]

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[34] For further information and illustrations, see LaRocca (ed.), *Warriors*, pp.70–77.

[35] LaRocca (ed.), *Warriors*, p.117.

[36] LaRocca (ed.), *Warriors*, p.92.

[37] Stone, *Glossary*, pp.53, 56; Robinson, *Oriental Armour*, p.164.

[38] Heath, *Armies of the Nineteenth Century: Asia 1*, p.161.

Tibetan Chainmail Armour of the Post-Gunpowder Period

We have seen that the era of the heavily armoured cavalryman ended in Tibet in the mid-seventeenth century following the introduction of firearms and that the Tibetan military then underwent a transitional phase that lasted from the mid- to late seventeenth until the end of the eighteenth century. The noble cavalrymen, which constituted the key fighting component of the Tibetan military, discarded the use of horse armour but continued to wear personal armour, although of the lighter chainmail (*a lung gi khrab*, 'armour of rings') of the Indo-Persian style that they had encountered in Bhutan instead of the old lamellar style derived from Inner Asia. The Bhutanese-style of chainmail armour consisted of a short-sleeved chainmail shirt reaching to the waist or hips. This was worn with a simple helmet made of a one-piece, hemispherical iron bowl with upturned ear and neck flaps of fabric instead of the old Tibetan – and Inner Asian – style of eight-plate helmet. Most, or all, chainmail used in Tibet was imported from India, Bhutan, and possibly the Middle East. Tibetans certainly acquired Persian, Indian, and Bhutanese chainmail in trade or as diplomatic gifts.[39] Poorer men instead wore quilted cloth armour (*sring bal khrab*) of the style also used by Mongols (who called it '*dasa*') and Manchus or leather armour (*bse khrab*). The Tibetan warriors first encountered by the Manchus were of this type, wearing chainmail or quilted cloth instead of lamellar armour.[40]

As additional chest protection, most also wore a set of two or four polished, circular iron disks (*me long bzhi*, 'four mirrors') worn over the chainmail, with the disks on the centre of the chest, back and under each arm, respectively, held by leather cross-straps. Early depictions show only two disks, while specimens collected from much later religious festivals consist of four interconnected disks. The use of metal disks was a feature that resembled many Qing suits of armour (the *huxinjing* already referred to) but, when four disks were used, instead derived from the round variety of the originally more often rectangular Perso-Indian *char-aina* or *chahar-a'inah* (Persian: four mirrors) plate, which, in its round form, was common in Nepal, Sikkim, and Bhutan.[41] Surviving specimens in museums seem not to have been modified, which leads to the disappointingly vague conclusion that a Tibetan armoured cavalryman wore either two or four disks. As yet further protection, the warrior also wore an armoured belt made of iron plates (*lcags sked*, 'iron belt').

The introduction of lighter personal armour was a significant change for the Tibetan warriors, and it seems clear that this reform, as noted, reached

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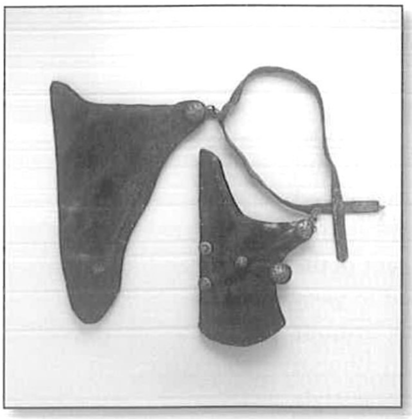
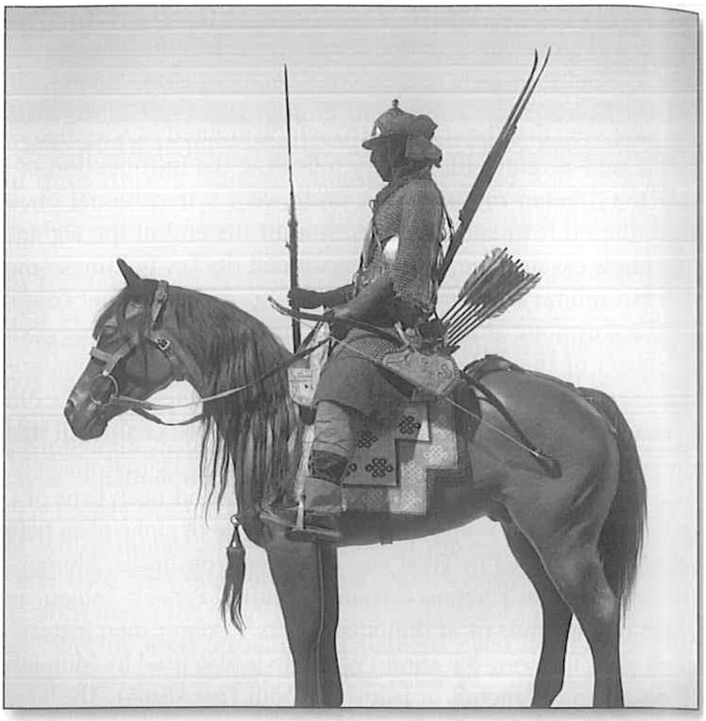
[39] See, for example, Robinson, *Oriental Armour*, pp.163–64; LaRocca, 'Rediscovering the Arms', p.5.

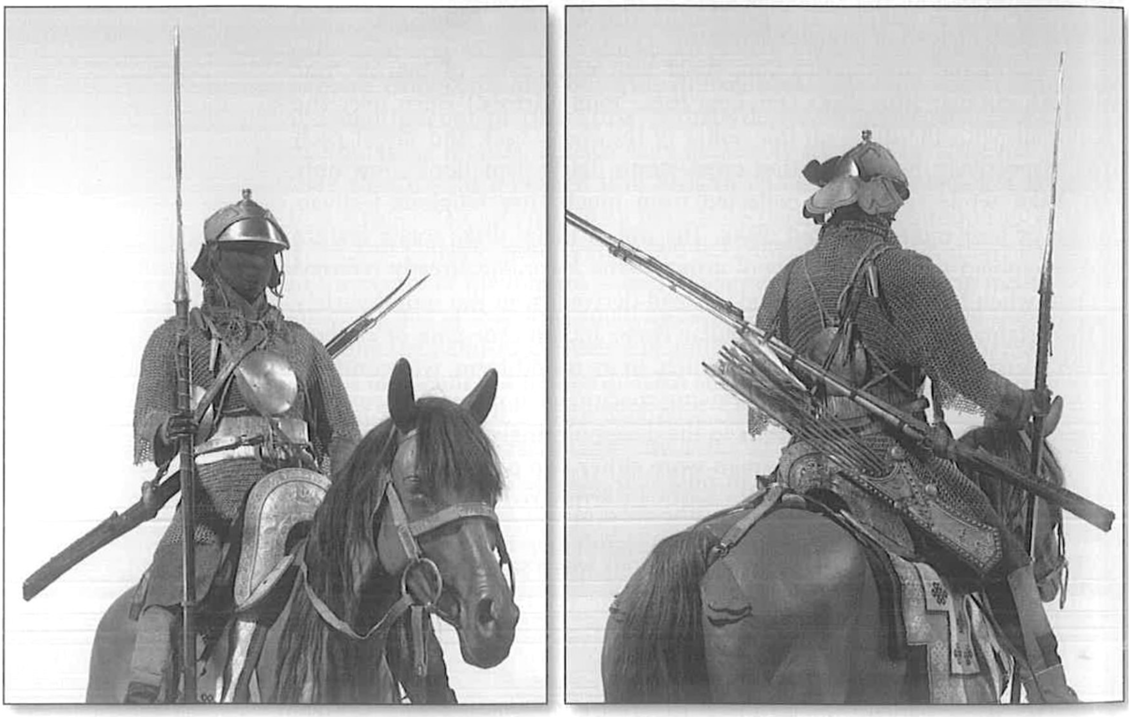
[40] On Tibetan chainmail armour and related equipment, see LaRocca (ed.), *Warriors*, pp.126–37.

[41] An example of such a suit of armour from Sikkim or Bhutan is shown in Stone, *Glossary*, p.52. The four mirrors should not be confused with the breastplate used by Tibetan oracles or the ornate pectoral disk that customarily adorns the images of Tibetan deities. LaRocca (ed.), *Warriors*, pp.39 (Fig. 37), 45 (Fig. 41), 126.

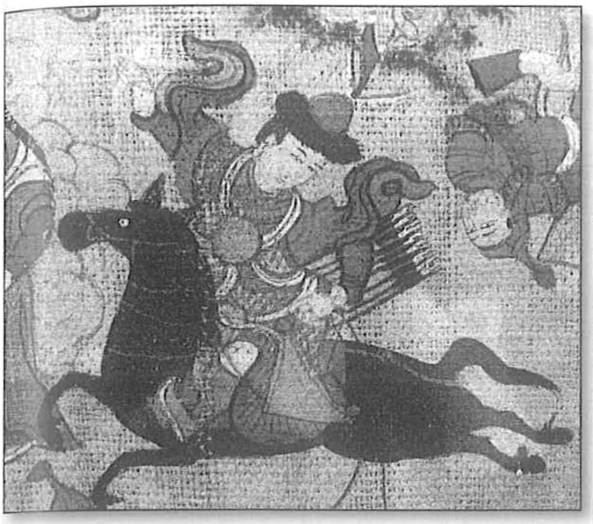


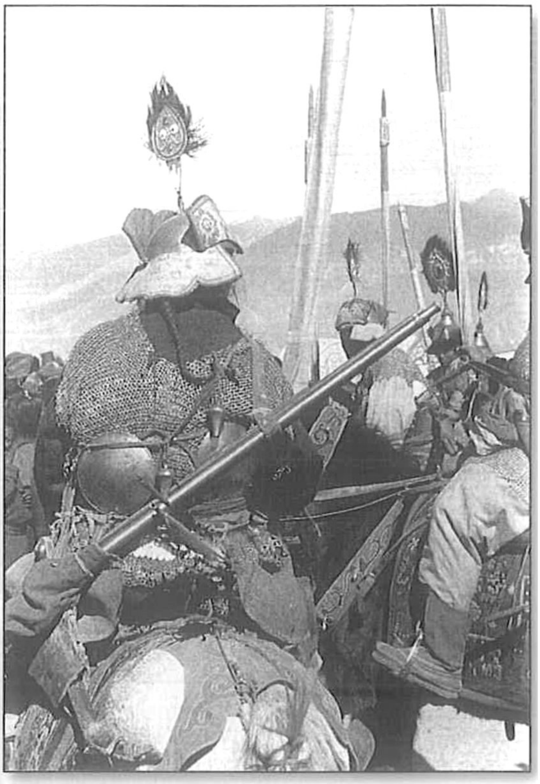
Tibetan or possibly Mongolian bow case and quiver, fifteenth to seventeenth century. Bow case: length of 63.5cm, width of 41.9cm. Quiver: length of 50.8cm, width of 29.2cm. (The Metropolitan Museum of Art, New York)

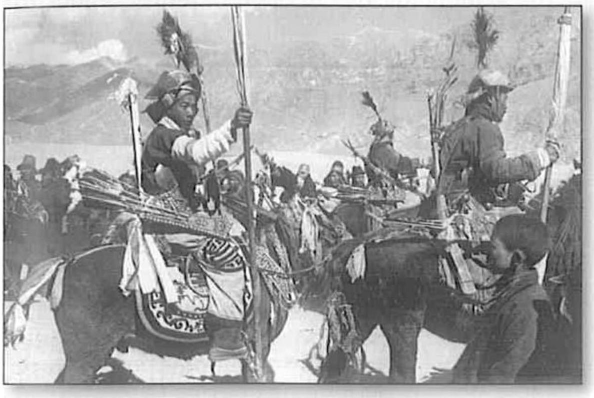




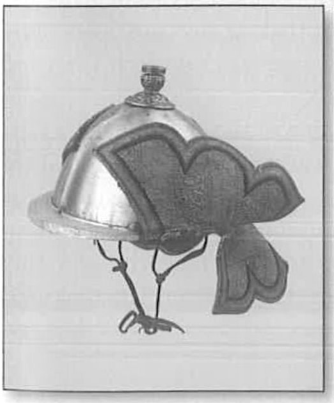
Tibetan armoured cavalryman, seventeenth to eighteenth century. In part from the collection of George C. Stone. (The Metropolitan Museum of Art, New York)



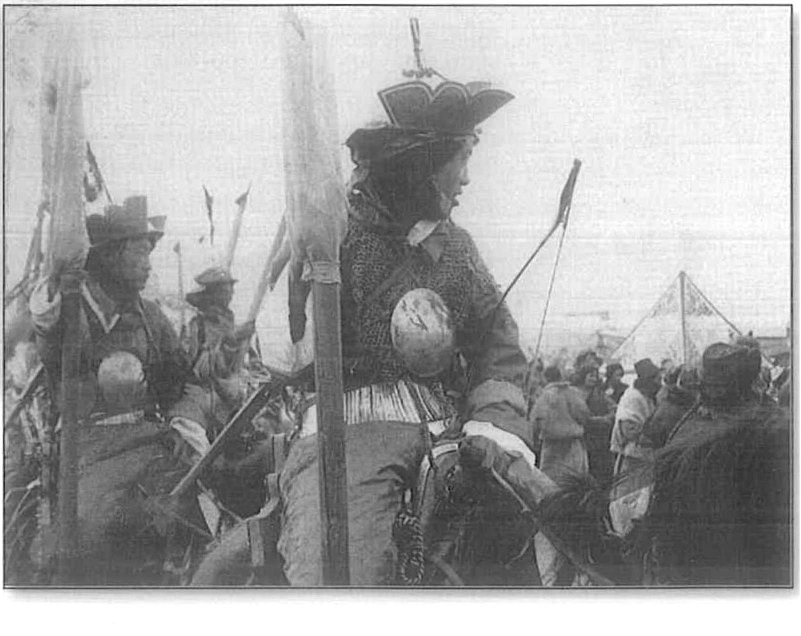




Tibetan cavalrymen in Bhutanese-style armour. In early illustrations, the cavalryman wears only two metal disks on his torso: one on the chest and one on the back. (above left) Tibetan officer, seventeenth to eighteenth century (nineteenth century painting, *Musée Guimet*, Paris), (left, above and below) later descendants of Tibetan noble cavalrymen in pre-1793 armour, Lhasa (photographs by Ilya Tolstoy, 1943; Brooke Dolan, 1943; Harry Staunton, 1940).



Tibetan helmet, seventeenth to eighteenth century. (The Metropolitan Museum of Art, New York)



Tibet from Bhutan. Quite a few types of arms and armour in Tibet have been regarded as being of Bhutanese origin or at least having been made in Bhutanese style. These weapons are generally lighter than the traditional Tibetan ones. In particular, the simple helmets and chainmail cuirasses that, until the mid-twentieth century, were provided by Tibetan noblemen for use in religious ceremonies in Lhasa are regarded as being Bhutanese in style.[42] In the same way, the old, heavy Inner Asian-style lamellar armour, for men and horses, were replaced with lighter chainmail cuirasses for the men and no armour at all for the horses. Other examples of Bhutanese styles include the common type of matchlock and a kind of single-edged sword similar to those used in Bhutan. When, and how, did these Bhutanese styles of arms and armour become common in Tibet? There is no firm evidence on which to base an answer, yet it should be remembered that Tibet and Bhutan fought a great many wars from the founding of Bhutan through the flight there of a Tibetan leader in 1616 to the Tibetan intervention in a Bhutanese civil war in 1732. In these wars, Tibetan forces usually invaded Bhutan, where they were defeated each time.[43] Tibet only gained the upper hand in 1730, during the Bhutanese civil war of 1729–1735, when the Qing-supported Tibetan ruler Pholhanas (pho lha nas) successfully invaded Bhutan. In return, Pholhanas was promoted and recognised by the Qing emperor. Even so, a second invasion was needed in 1732 to finally bring the Bhutanese to surrender. Bhutanese representatives were then escorted to Qing China formally to pay tribute, whence they returned in 1735. Henceforth, a rapprochement began between Bhutan and Tibet.[44]

The old, heavy lamellar armour fell out of use in Tibet by the mid-seventeenth century. Judging from radiocarbon datings, no lamellar armour was made in Tibet after this time, and most surviving pieces are almost certainly much older. It is hardly an unreasonable conjecture that it was the repeated defeats against the Bhutanese, more lightly armoured but armed with matchlocks, that influenced the Tibetan decision, at some point between the mid- to late seventeenth century, to adopt Bhutanese styles of arms and armour instead of their old, cumbersome styles that, in any case, were more suited for war on the steppe than in the rough country of southern Tibet and Bhutan.[45]

While Bhutanese influences are clearly visible in the armour and a type of sword dating from this period, the Tibetan arms and armour remained somewhat different from the Bhutanese prototypes. So did, for instance, the Bhutanese style of sword fittings become common in southern and eastern Tibet. However, while on Bhutanese swords pierced metalwork decorating the scabbard was usually made of relatively delicate cast silver, Tibetans used heavy, pierced ironwork. In addition, the sword itself was generally more pointed than most Bhutanese swords.[46] Tibetan armour in Bhutanese style likewise differed in minor details from the Bhutanese originals.

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[42] LaRocca (ed.), *Warriors*, p.68.

[43] John A. Ardussi, 'Formation of the State of Bhutan ('Brug gzhung) in the 17th Century and Its Tibetan Antecedents', *Journal of Bhutan Studies*, 11 (Winter 2004), pp.10–32, and 'Rapprochement', pp.64–83.

[44] Ardussi, 'Rapprochement', p.69.

[45] The probable introduction of this set of equipment in this particular time period was first suggested in LaRocca (ed.), *Warriors*, pp.126–27, without, however, offering any possible explanation for the event.

The Bhutanese style of armour remained in use in Tibet until the end of the eighteenth century, when – following the military traditions of the Qing – the Tibetans decided that even chainmail armour clearly had played out its military role. Most remaining armour was retired as votive gifts to the monasteries. From 1793, when the Qing commanders reformed the Tibetan military, armour was no longer used by the regular Tibetan army.

Tibetan Horse Armour

A number of pieces of Tibetan lamellar horse armour have been preserved, and it has already been mentioned that historical sources show that Tibetans used horse armour early on, since at least the eighth century.[47] The use of horse armour persisted for several centuries in the general region of Tibet, and there is reason to expect that the Tibetans used horse armour for at least as long as the medieval Mongols. In a few cases, radiocarbon tests have been made, and the results consistently date the pieces from the early to mid-fifteenth century to the mid-seventeenth century at the latest.[48] This suggests that the use of horse armour went out of fashion at the same time as the use of suits of lamellar armour for the horsemen.

Like the armour used by the men, Tibetan horse armour, until then, remained fundamentally unchanged since earlier times. Compared to the horse armour occasionally used by the Manchus, it was heavy, consisting of chamfron, peytral, crupper defences, flanchards, and, more often than not, neck armour.[49]

The chamfron (defence for the horse's head) was made of leather, covered with a wide strip of iron down the centre of the horse's face, with pierced brass finials hinged at top and bottom, one on the horse's nose and the other between its ears. Next to the iron strip, the chamfron was covered with small square plates, each with a tall central boss.

Neck armour, when present, consisted of two panels, one for each side of the neck, and reached from throat to shoulders. It was made of overlapping bands of stiff tooled and lacquered leather set with rows of iron studs. Golden decorations on red were prominent colours, at least in the elaborate specimens currently preserved in museums.[50]

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[46] See, for example, LaRocca (ed.), *Warriors*, pp.167, 171. The difference between the point of a Tibetan and a Bhutanese sword is clearly illustrated by the two specimens, illustrated by LaRocca.

[47] Beckwith, *Tibetan Empire*, p.110 n.7.

[48] LaRocca (ed.), *Warriors*, pp.6 and 96 with references, 116, 288.

[49] This section is based on Robinson, *Oriental Armour*, p.163; Stone, *Glossary*, pp.95–99. See also LaRocca (ed.), *Warriors*, pp.96–115, 214–51.

[50] See, for example, LaRocca (ed.), *Warriors*, pp.105–15.

The peytral (breast defence) was made of leather, in the same style as the neck armour, or consisted of long iron lamellae laced in the regular manner but mounted on panels of fabric or leather and usually with a lower border of stiff lacquered leather edged with studs and a fringe of red-dyed yak hair and strips of brocade.

Similar crupper defences were provided for either side of the hindquarters, with another section to fill the space left beneath the tail. Flanchards (flank defences) of lacquered leather panels of oval shape were suspended by leather thongs from the saddle on either side of the horse's body. Any gaps left between the peytral and crupper sections were covered with hinged lacquered leather panels, fastened by leather thongs or small tinned buckles and plaited narrow buckskin straps.

In one specimen, until recently preserved in the Victoria and Albert Museum, London, the middle of the horse's body is protected only by the heavy rugs that form the saddle cloths.[51]

There is one (and only one) reference from as late as 1903/1904 that Tibetan 'high officers sometimes clothe their horse in armour, a new set of which was captured'. This was written by the noted British Tibetologist Laurence Austine Waddell (1854–1938) in his book *Lhasa and Its Mysteries* (1906). This reference, while it cannot strictly speaking be disproven, is not very credible. There seems to be no evidence but Waddell's account for the continued use of horse armour in Tibet up to that time. Moreover, Waddell was a physician and a Tibetologist, not a fighting soldier, and it was the exotic, the picturesque, and seemingly medieval aspects of the Tibetan soldier that caught his fancy. Waddell's assistant later described how the physician collected old votive arms and armour that he found in monasteries.[52] No surviving Tibetan works of art from this period show horse armour. Nor is there any mention of horse armour in surviving Tibetan texts.[53] Yet it might be possible that, as in the Qing army, a few Tibetan officers possibly continued to ride horses covered in armour made of textile, not metal, for ceremonial purposes even after the mid-seventeenth century. Such types of horse armour have reportedly survived in Tsaparang, in western Tibet, and in Phyang Monastery in Ladakh.[54] The preserved examples of textile horse armour are reinforced with small iron bosses in a style not dissimilar yet not identical to the one used by the Manchus.

This might also be the point to note that, when a horse or mule was used by a Tibetan official, whether lay or religious, a large tassel (known in Tibetan variously as '*snying dom*', '*dom dom*', and '*aog dom*') consisting of a tuft of red yak was hung from the breast strap of his mount. For officials of the fourth grade or higher, such as a *dahpon* (or, perhaps, a Qing lieutenant colonel if stationed in Tibet), two red tassels (known in Tibetan as '*dom dom*

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[51] See, for example, Stone, *Glossary*, p.98.

[52] Fredholm von Essen, 'Impact of Manchu Institutions'.

[53] LaRocca (ed.), *Warriors*, p.97.

[54] LaRocca (ed.), *Warriors*, p.96 with references.

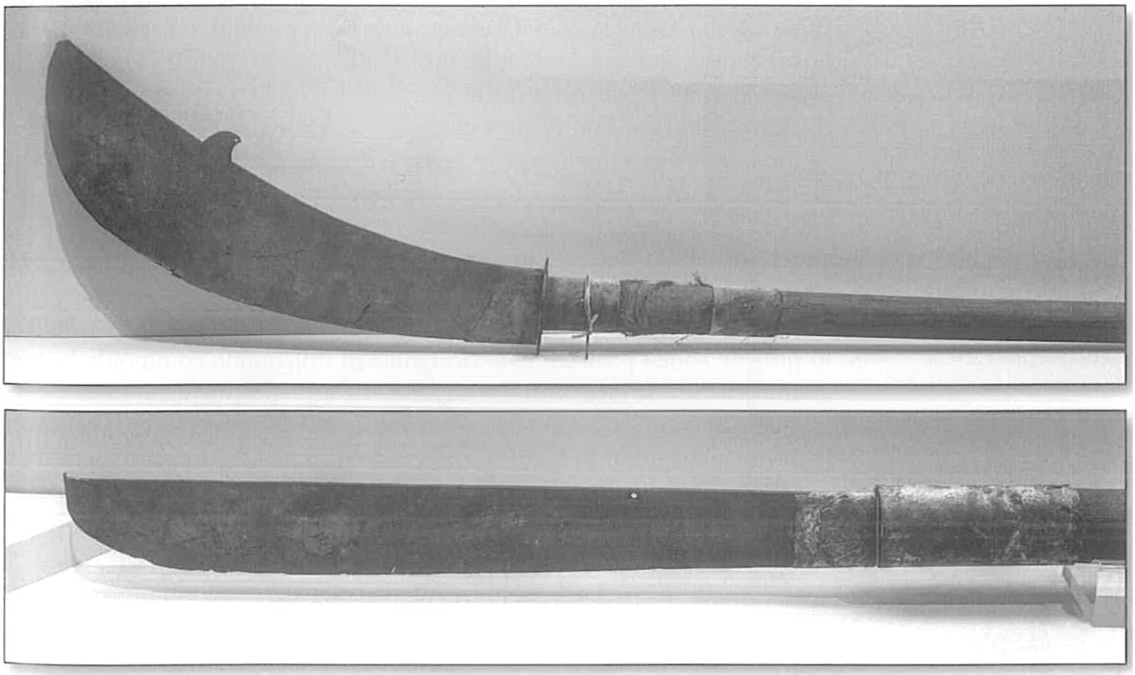
nyis brtsegs') were used. Both lay and religious officials of the highest ranks also used saddles covered with yellow brocade.[55]

Korean Tributary Army

Korean soldiers were generally armed with weapons similar to those used in China. Soldiers carried long spears, bamboo spears, polearms of various types (again corresponding to those in use in China, such as halberds, glaives, and tridents), bows, and muskets, with swords as sidearms. While peasant levies often had limited access to weapons, they still seem to have been able to arm themselves when called up.

We have already seen that Korea was in a military transition period, with the greatest change the one that transformed the Korean army from a force primarily armed with bows into one chiefly armed with Japanese-style muskets. By the time of the late sixteenth-century Japanese invasions, the Korean army already had obsolete, Ming-style arquebuses. However, these were quickly found inferior and, for this reason, phased out from the Korean inventory as fast as modern muskets could be procured. Archery remained a favourite pastime of the *yangban* gentry, many of whom became expert marksmen with the bow. Yet, for military and practical purposes, musketeers henceforth rapidly overtook the diminishing number of archers in military importance.

Korean glaives. (Anon.)



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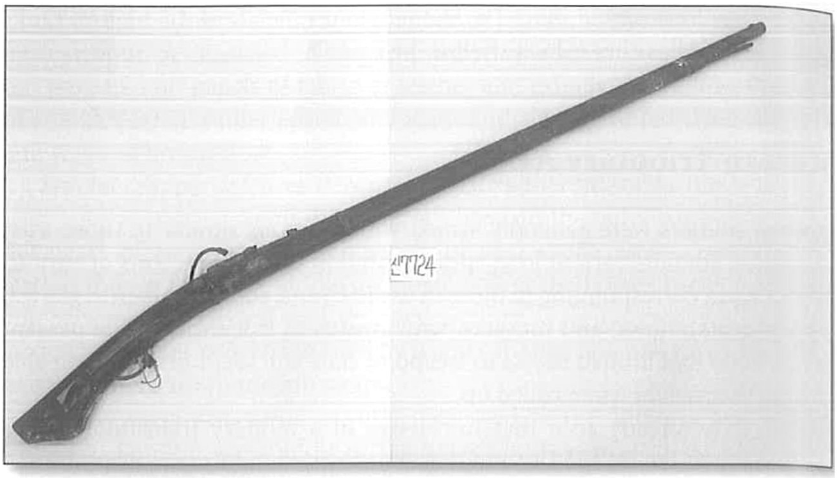
[55] LaRocca (ed.), *Warriors*, pp.236–39, 285–87.



Korean matchlock musket. (National Museum of Korea)

Korean Armour

Armour was commonplace in the Korean army, but not everybody could afford it. Most soldiers were expected to supply their own arms and armour. Equipment accordingly came in a range of price levels, with style and quality depending on the soldier's means. Fresh conscripts in time of war may not have had any armour at all.

The most common types of armour were lamellar (*chalgap*), which had a long history in Korea, and brigandine (*dujeonggap*) of originally Chinese design.

Lamellar armour consisted of metal or rawhide lamellae not unlike those used in Tibet. The lamellae may have been pointed in black lacquer or possibly other colours. Earlier, chainmail and plate armour (*gyeongbeongap*) was used as well, but this style, unlike lamellar, had fallen out of fashion by the time of Nurgaci and Hung Taiji.

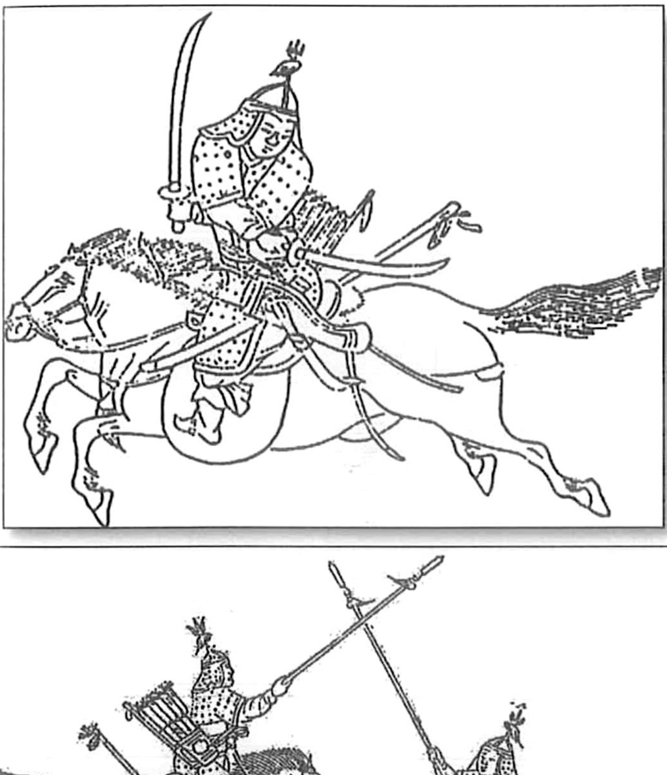
Brigandine armour typically consisted of a coat that reached halfway down the arms and often extended just below the knees. It was constructed with an outer layer of cotton canvas over an inner lining of hemp cloth to which was attached a layer of iron or rawhide plates. Rows of round-headed rivets of iron or brass, visible on the outer fabric, secured the armour plates that lined the inside of the armour. The inner fabric was commonly quilted to provide added protection. Officer suits of brigandine commonly had an additional outside layer of silk with aesthetic embellishments.

Some suits of brigandine armour may have carried an additional outer layer of scale armour in the shape of a vest to protect the upper torso. When scales were attached to the coat, they covered essentially the same area of the torso that otherwise was most densely protected by the inner layer of plates and rivets.

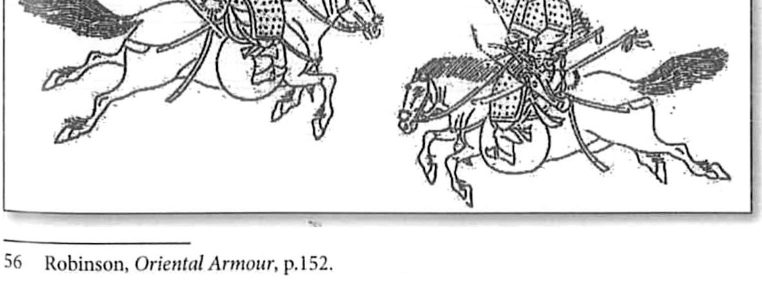
Although metal, leather, and quilted armour was commonplace in the region, Koreans also experimented with armour made of laminated paper or fabric (*eomshimgap*). The principle was based on the placing of many sheets of the chosen material one atop another so that the material became sufficiently thick and hard to absorb a blow, deflect a cutting edge, or turn away a point.

Laminated armour was, in its simplest form, a canvas vest or coat that was padded on the inside with cotton, hemp, paper, and perhaps some leather. This is believed to have been the least expensive type of armor, for which reason it may have been the primary type of armour that peasants could afford. However, because of the quality of the country's paper, paper armour was a Korean specialty. Ming China imported Korean paper, or indeed already-manufactured paper armour, for use by coastal militias in the southern provinces. The best paper armour consisted of from 10 to 15 layers of paper laminated together. Such armour might even protect the wearer from arquebus shots.[56]

Shields were in common use. Korean sword-and-buckler men carried wicker shields. Many seem to have been painted in bright colours with the face of a dragon or monster. The style is reminiscent of the wicker shields carried by tiger men in China.



Korean cavalryman in brigandine armour, as depicted in a late eighteenth-century military manual. The soldier's unusual armament derives from the then-promoted deployment of cavalry armed with twin swords (*ssangdo* or *ssanggeom*) and a flail (*pyeongon*) made out of a long hardwood stick attached with a chain to a shorter stick with iron nails. The presence of these weapons in earlier Korean armies is possible but essentially unknown, and, by this time, twin swords were perhaps more often wielded by courtesans performing the sword dance than by soldiers. This cavalryman also carries a perfectly serviceable bow in the Manchu manner. (*Muyedobotongji*, 'Comprehensive Illustrated Manual of Martial Arts', 1795)



Korean cavalrymen in brigandine armour, as depicted in a late eighteenth-century military manual. These soldiers are more conventionally armed, with spear and bow in addition to flail. (*Muyedobotongji*, 'Comprehensive Illustrated Manual of Martial Arts', 1795)

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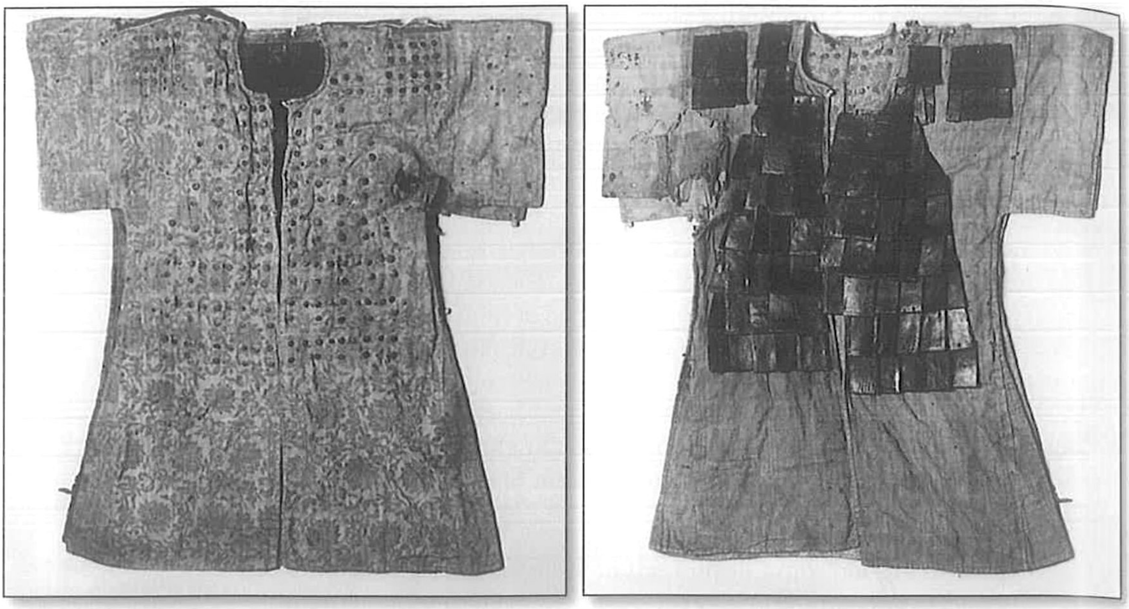
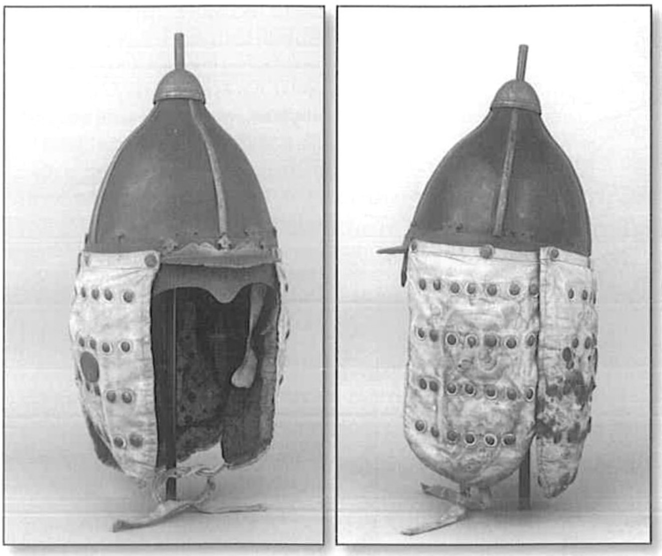
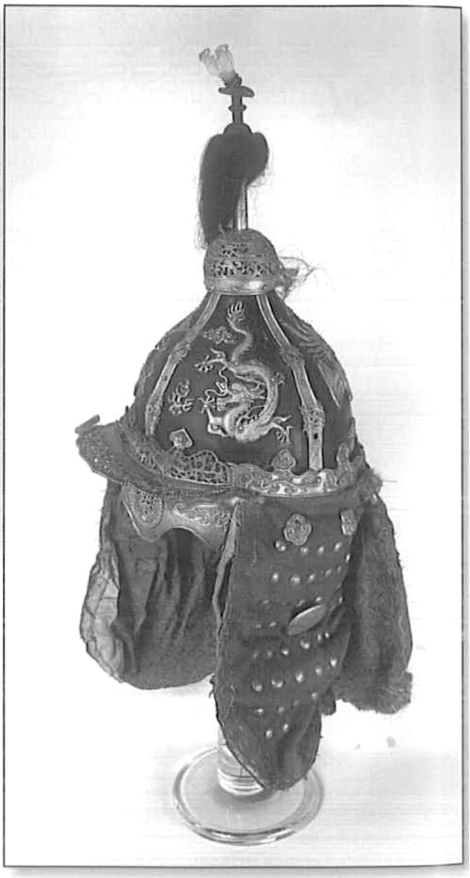
[56] Robinson, *Oriental Armour*, p.152.



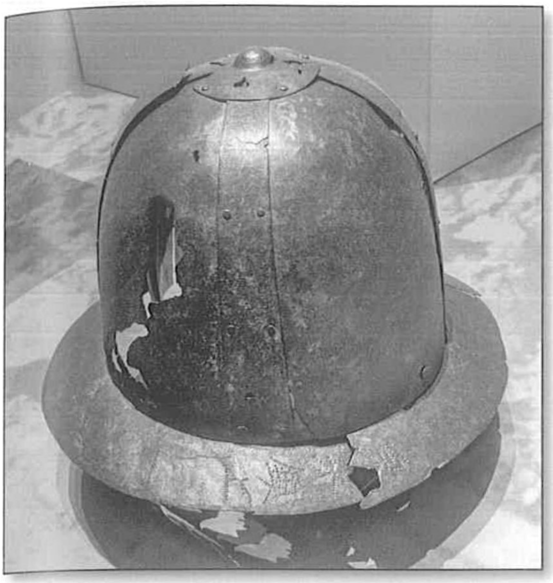
Korean brigandine armour, consisting of an outer layer of woven silk fabric supported on the inside by stiff rawhide scales attached to a hemp lining, eighteenth century. The armour is inscribed with the names of those who made or used it. A similar suit of armour of this type from the collection of George C. Stone at The Metropolitan Museum of Art, New York, has a total weight, without helmet, of 7.7kg. (National Museum of Korea, Seoul; accession no. Jeung 3570)



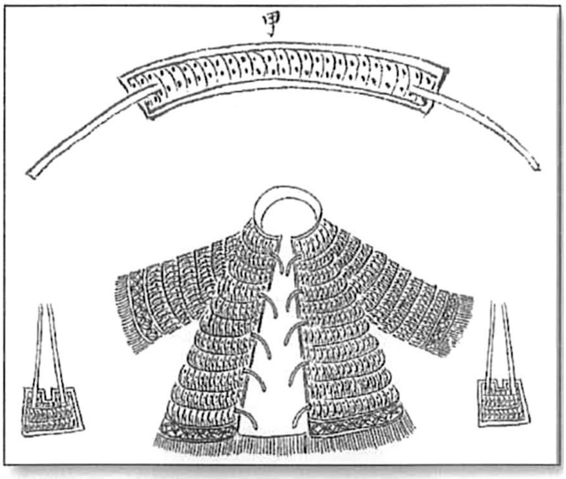
Korean helmet of traditional, originally Inner Asian style with neck and cheek flaps of brigandine. Customarily dated to the sixteenth to nineteenth century. Total weight: 2.35kg. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)



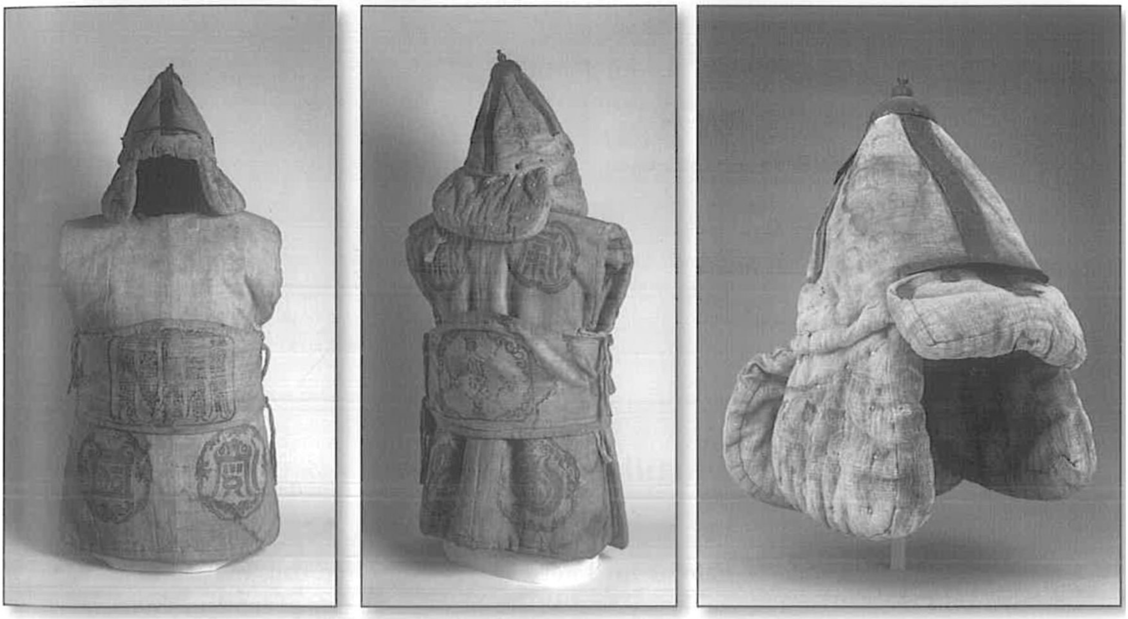
Korean officer's helmet of traditional, originally Inner Asian style. Black with gilded embellishments. Neck and cheek flaps of red textile fabric brigandine with green silk lining. Customarily dated to the sixteenth to nineteenth century. Total weight: 2.35kg. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)



Korean helmet with a down-turned brim of the type that perhaps made the Korean musketeers in Qing service known as 'Big Heads'. The rounded bowl is built up of four main segments joined by other plates, riveted on the outside. (Replica of surviving helmet found at Busan)

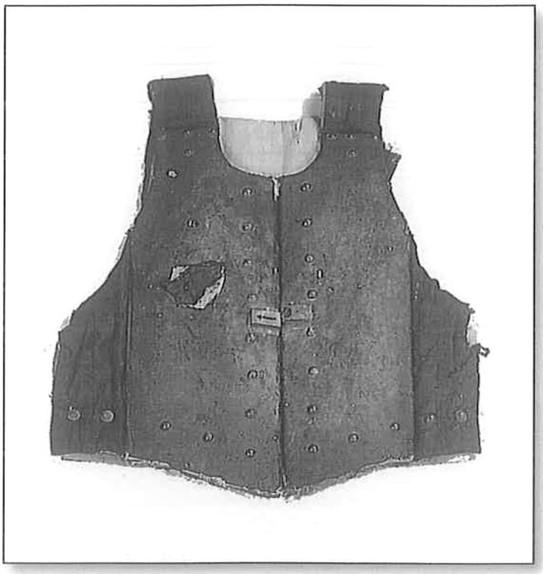


Korean lamellar armour. The smaller lamellar pieces around the cuirass are additions for throat and armpit protection to be strapped on either underneath or above the armour. (*Sejong sillok*, 'Veritable Records of Sejong', 1454)

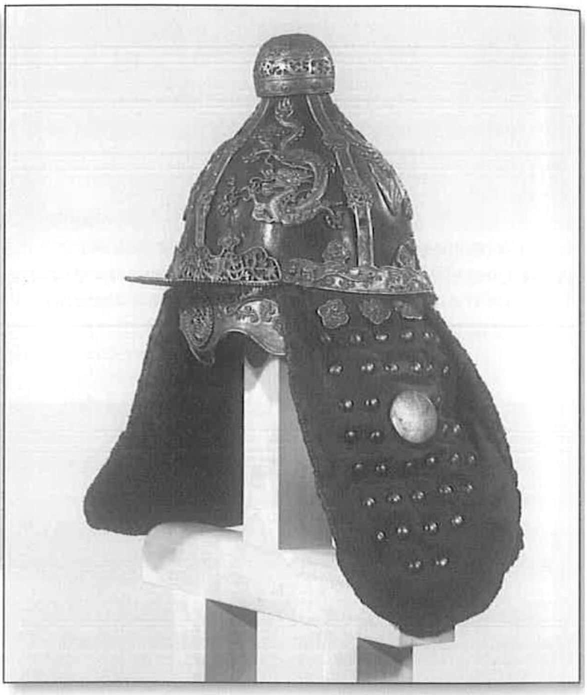


Armour tentatively dated to the eighteenth century made of 30 layers of a tough cotton fabric, cut and sandwiched together with hemp stitching to give an overall thickness of less than 2.5cm. A similarly constructed belt gives additional protection. The helmet is reinforced by a finial with four radiating bands made of tinned iron. The brim, cheek flaps, and neck flap of the helmet are quilted in the conventional manner. The defensive value of this fabric armour is additionally augmented by a series of protective Taoist and Buddhist symbols printed with wood blocks. Total weight: 8.5kg. From the collection of George C. Stone. (The Metropolitan Museum of Art, New York)

Those soldiers who had the means wore helmets. Most were of traditional, originally Inner Asian style, not unlike those used by the Manchus. However, many Korean helmets had a protective brim, either around the entire helmet or at least extended over the brow. Some, possibly the older types, were characterised by a flat crescentic peak.[57] Yet others instead had a tassel affixed to the top of the helmet. The helmet of a man of high rank would also carry a decorative finial on the top. Helmets typically had protective neck and cheek flaps made of brigandine or canvas. These were often studded for additional protection. Quality helmets would come with an additional layer of silk that covered the flaps for aesthetic embellishments.



Simple armour vest made of laminated paper and fabric, of the type presumably used by peasant levies. (Anon.)



Korean officer's helmet and armour, nineteenth century. When scales were attached to the coat, they covered essentially the same area of the torso that here is most densely protected by rivets. (Brooklyn Museum)

Korean Artillery

Korean armies used cannon, mortars, and rocket launchers of Chinese models. Cannon fired not only stone and iron balls but also arrows and, at least at sea, heavy iron-tipped wooden arrows of large calibre. The rocket launcher (*hwacha*) was similar to the Chinese model but was mounted on a two-wheeled carriage instead of the traditional Chinese wheelbarrow mounting. It launched multiple rocket-propelled arrows.

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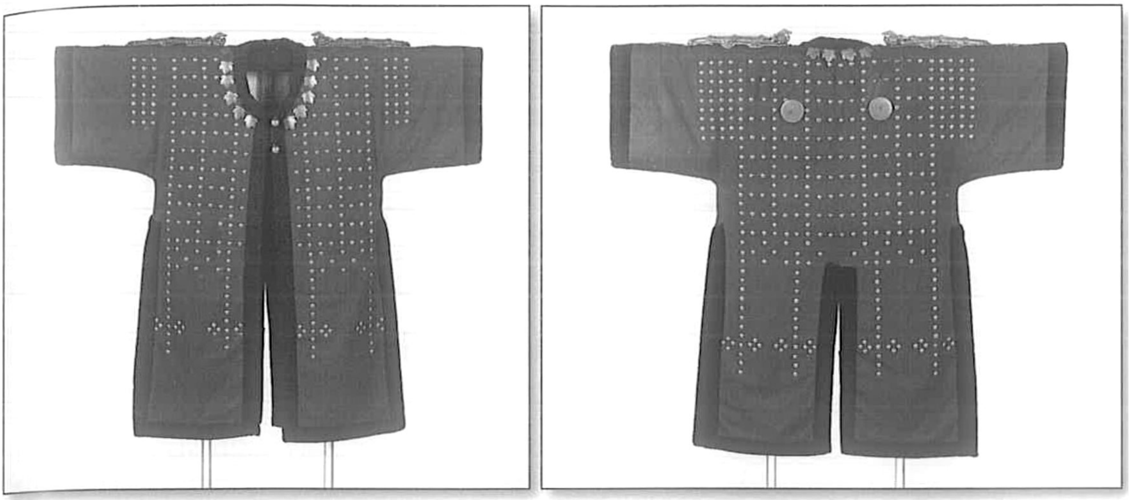
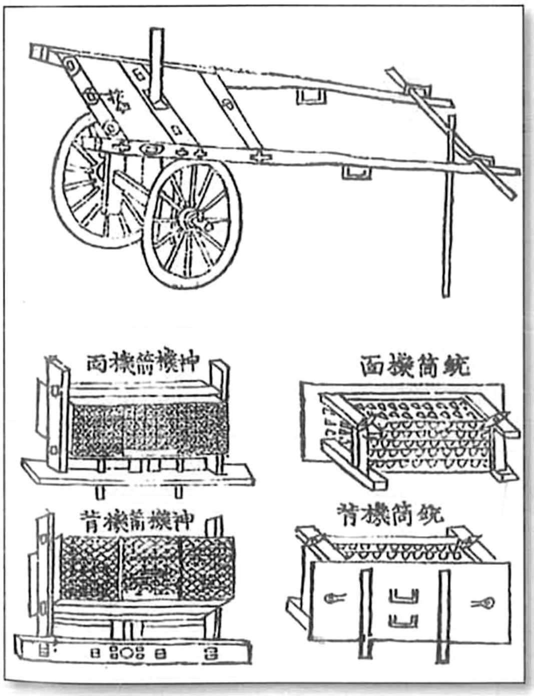
[57] John L. Boots, 'Korean Arms and Armour', *Transactions of the Royal Asiatic Society (Korean Branch)*, 23:2 (1937), pl.34.



Korean officer's helmet and armour, nineteenth century (continued).

When the Ming and Qing, in the early seventeenth century, adopted modern gun-barrel artillery, Korea followed their lead. Henceforth, there were few if any differences between the cannon of Korea and the Qing empire.

For defensive purposes, Korean infantry relied on various means to break up a hostile cavalry charge. Caltrops were in common use and derived from China, where such weapons had been used for centuries. Surviving specimens show that they sometimes were tied together with a rope into a long line, which was easier and faster to deploy than individually scattered caltrops. Such a caltrop line was also easier to retrieve. Koreans also used *chevaux-de-frise*, an anti-cavalry obstacle that was positioned in front of the infantry ranks to provide protection against cavalry charges. Korean *chevaux-de frise* were used similarly to those employed in European warfare.


神機箭機面
銃筒機面
神機箭機背
銃筒機背

Korean rocket launcher (*hwacha*), unlike most of its Chinese counterparts mounted on a carriage with two wheels. (*Gukjo orye seorye*, 1474)

6

Flags, Standards, and Awards for Bravery

Flags and Standards

Chinese armies traditionally relied on large quantities of flags to boost morale, impress enemies, and use as signals. The number of flags fielded seems to have increased with time, so the early Qing armies probably carried far fewer flags than the nineteenth-century armies. By the late eighteenth century, Lord Macartney reported that a flag was attached to every 200 men while on campaign, which would, unsurprisingly, mean one flag per squadron or company (this piece of information also, as noted, coincidentally confirms the suggestion that this probably was the normal strength of a field unit). Far more flags were displayed when the troops were called out for parade duty, often as many as one flag per 10 or even five men. This is confirmed by contemporary paintings. It is fair to assume that a large number of flags was always fielded.[1] In Manchu cavalry units at least, the unit flag was strapped to the standard bearer's back. The Qing armies also employed small, triangular red flags for signalling purposes (more on which below). Regimental commanders and above carried little triangular or square flags (*daling*) as marks of authority. These were yellow, with a red scalloped border and the character '*ling*', indicating a warrant to command, inscribed in vermilion ink.[2]

The earliest of Nurgaci's flags known to posterity appeared in the 1590s. These were five unit banners of plain yellow, white, red, blue, and black colour, respectively, each about 0.5m in length. The black banner was used by the Chinese-martial units until their later reorganisation and absorption into the

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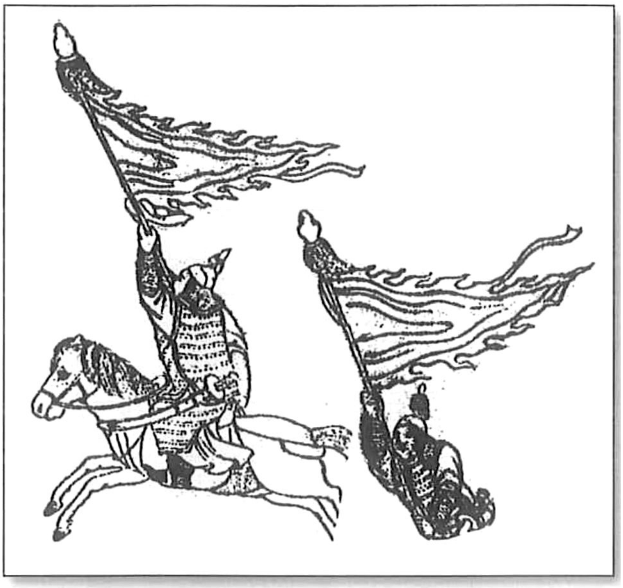
[1] Amiot, *Art militaire*, pl.1ff (one flag per five men during displays); Cranmer-Byng, *Embassy to China*, p.218 (one per 10 men at parades only); Cavendish, 'Armed Strength', p.714 (100–300 per battalion); Lamprey, 'Economy', pp.410, 423–24 (one per 10 men in camp and in battle); Bishop, *Korea & Her Neighbours*, vol. 1, p.246 (one per 10 men at parade).

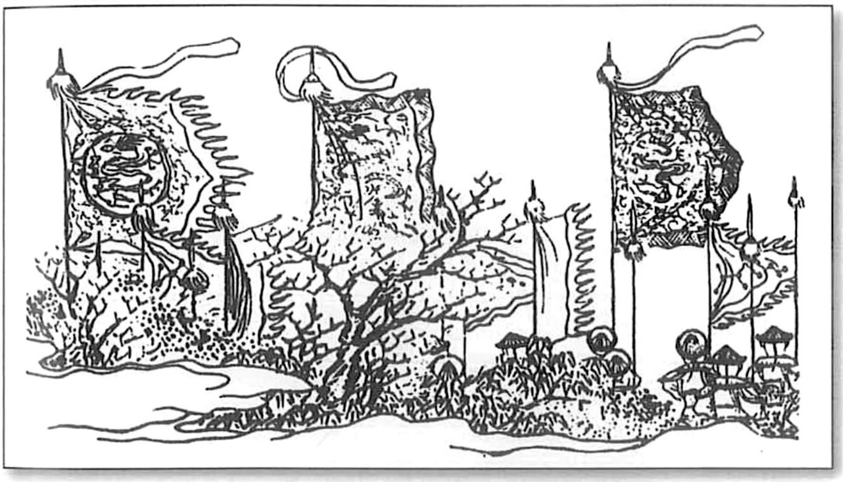
[2] Heath, *Armies of the Nineteenth Century: Asia 2*, p.63.

Eight Banners in 1642. Some flags, especially those depicted as associated with Nurgaci himself, were triangular with scalloped edges and a narrow streamer on top. Nurgaci, unlike his commanders, is always depicted as accompanied by two such banners as well as two large parasols to mark his high rank.

Later Manchu flags were generally rectangular or triangular and made of dyed silk. Many had serrated or deeply scalloped edges, representing flames, sometimes but not invariably in contrasting colour. Most had a streamer fastened just below the finial. Flags were either plain or decorated with dragons, tigers, or other martial or auspicious symbols, among them flame and cloud patterns, constellations, and auspicious geometrical figures such as circles and zig-zag lines. Size varied enormously, with the larger flags up to 3.6m in length and from 1.8m to 2.4m in breadth.[3]



Early triangular banners. (*Taizu shilutu*)



Seventeenth-century rectangular banners. (Okada Gyokuzan, *Morokoshi meishō zue* 5, 1806, from a Chinese original)

Banner units fielded large unit banners, as well as smaller flags that were often placed in flag holders strapped to the soldiers' backs by means of a socket attached to the belt or were flown from lances. As mentioned above, the banners all had distinct standards, yellow, white (actually a buff shade), blue, and red, as well as the same colours but with coloured borders, the first three trimmed with red, the red banner with white. The plain banners were square, while the bordered banners were triangular. All were embroidered with a dragon chasing a flaming pearl.

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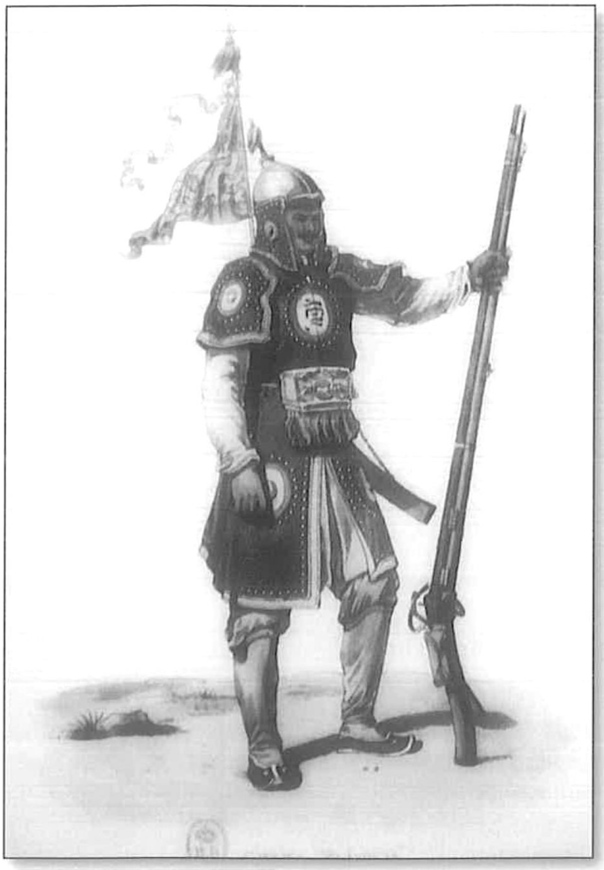
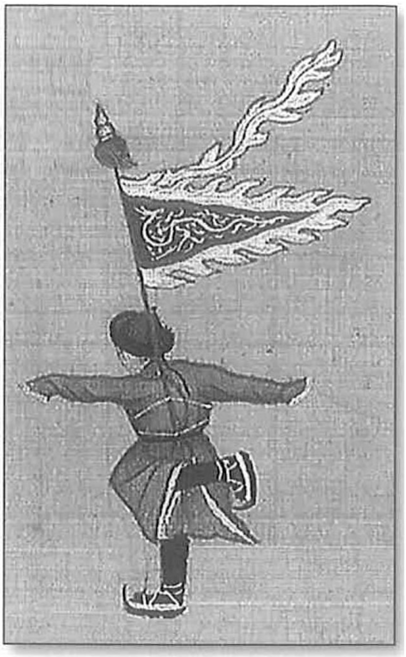
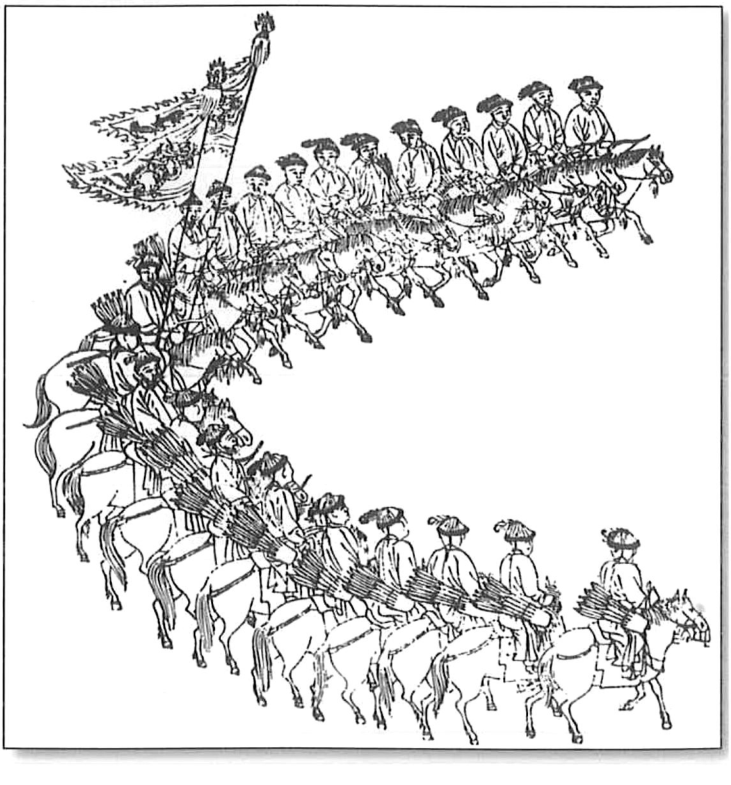
[3] Lamprey, 'Economy', p.423; Heath, *Taiping Rebellion*, p.24.



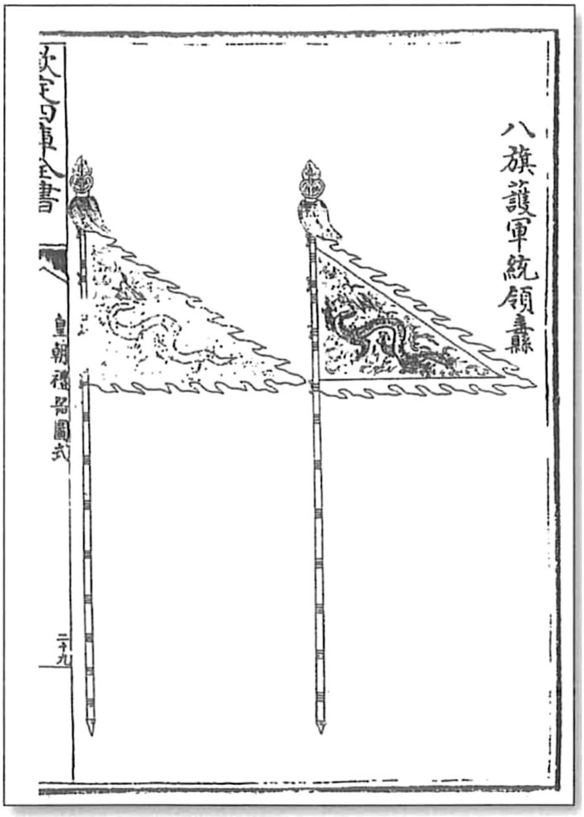
Flag strapped to a soldier's back. (William Alexander, 1793)



Flag strapped to a soldier's back during a display by the Ice Skating Battalion. (Anon.)



Flags of imperial guards. (Anon.)


八旗護軍統領纛
欽定四庫全書
皇朝禮器圖式
二十九

Green Standards flags. (Anon.)

The Green Standards units carried large triangular standards made of green satin with a gold dragon embroidered in the centre and a roughly 15cm-wide scalloped satin border. The scalloped border is sometimes described as red, but surviving specimens display borders of other colours, too. The length of the standard was typically around 1.5 times its breadth. Nineteenth-century observers reported standards from 2.4m to 3.1m in length and about 1.2m in breadth, but, based on both illustrations and surviving specimens, breadth was usually more extensive.[4]

Each standard was flown from a bamboo pole, generally around four metres in length and terminated by an iron spike that could be used as a weapon. Some Chinese trained in the use of flags as weapons, and contemporary foreign military observers thought that this exercise would be a formidable weapon against cavalry, with the bright colours of the flag being sufficient to turn any but a well-trained horse.[5] Manchu officers were known to grab hold of their unit standard and rush against the enemy, leading their men on by this means.[6] A painting by Castiglione of the Qianlong emperor's standard shows a rectangular yellow flag of a greater breadth than length and of about the same height as the man carrying it. The flag flies from a bamboo pole crowned with a silvered spike and a red tassel.

Flags fielded by non-regular units, such as the various militias and the later mercenary units of 'braves', were generally more colourful. Flags of the types and patterns mentioned above could all appear. In the nineteenth century, depictions of gods, unit inscriptions, and the *bagua* or yin-yang symbol were also used. By then, some units also carried flags with horizontal stripes. Some of these designs may have been used in earlier times, too, although evidence is lacking and it seems unlikely that they were used by regular forces. Most units of 'braves' carried flags emblazoned with the first character of the name of their commander.[7]

The various units were always distinguished by special unit flags that showed the place of the unit within its parent formation. Each squadron or company had a standard of its own, which, as far as can be ascertained, was usually triangular. This would be of the same pattern as its parent formation, but its main colours reflected whether the unit formed the vanguard (red), left wing (blue), right wing (white), centre (yellow), or rearguard (black).

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[4] See, for example, Cavendish, 'Armed Strength', p.714.

[5] Lamprey, 'Economy', p.423.

[6] Di Cosmo, 'Elephants', pp.8, 18; Di Cosmo (trans.), *Diary*, p.63.

[7] Heath, *Taiping Rebellion*, p.24.

The same colour sequence, as noted traditionally associated with Inner Asian and Chinese cosmology, was used for higher formations as well, with the addition of a plain or serrated border to the flag. If there was a sixth unit within the formation, it would usually be regarded as an additional centre unit and was thus identified by a yellow flag with a red border (incidentally the same colour combination as used by the Bordered Yellow Banner). A formation of only three units would fly a red flag for the centre (which was thus regarded as the vanguard), a blue flag for the left, and a white flag for the right wing. Artillery and jingal units were identified by black flags with white borders.[8] Since red symbolised south in the traditional cosmology, the entire formation was thus symbolically deployed facing south – which made sense with regard to the Manchu homeland.

Bravery Awards

Among soldiers, bravery in battle was frequently rewarded in the same way that civil officials were awarded for distinguished public service.

The highest military award bestowed by the emperor was the imperial yellow riding jacket (*huang ma gua*). This was a highly coveted distinction, in the early years conferred only for the most distinguished military service. Originally of the colour of the banner to which the man belonged, it was later awarded in the Qing dynastic colour yellow irrespective of the recipient's banner colours. According to imperial regulations, the imperial yellow riding jacket was worn only when accompanying the emperor outside court.

Another type of important award bestowed by the emperor was the honour of wearing the peacock feather (*gong qiaoling*) as a mark of imperial favour. It was only awarded to military officers and civil officials of the fifth grade and above. The peacock feather was a distinction awarded for merit (*shang gong*) and thus not available to every official. The peacock feather was divided into three grades: triple-eyed (*sanyan hualing*), double-eyed (*shuangyan hualing*), and single-eyed (*danyan hualing*), respectively. The first grade was a distinction conferred only upon imperial princes or else for the highest military achievements. The second was awarded to those of lesser rank for particular military achievements or service to the government. The third, commonly known as '*huayu*' or '*hualing*' only, was at first, with the yellow horse jacket, the prestigious symbol of the imperial guardsmen close to the emperor.[9] Subsequently, it was commonly, and in the later years of the Qing empire routinely, awarded for public service. By the end of the empire, it even became possible for officials to purchase the right to this, the lowest grade of the peacock feather.

The peacock feather was approximately 0.3m long. It was attached to the hat button through a small jade tube (*ling guan*) fixed to the crown of the hat and worn so that the feather protruded obliquely downwards over the brim of the hat at the rear. Soldiers on active duty wore two sable tails (*diao wei*) instead of a feather from the hat, a custom originating in insignia worn as part of the uniform on imperial hunting expeditions. The two fur tails were arranged in a V shape and were fixed to the crown of the hat, sticking out at the back. In the nineteenth century, this sable tail was variously described by Western observers as being of cat, fox, marten, mink, or squirrel.

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[8] Heath, *Armies of the Nineteenth Century: Asia 2*, p.63.

[9] Rawski, *Last Emperors*, p.82.

A lesser military award was the right to wear the blue feather (*lanyu* or *lanling*), conferred as a reward for services on officials of the sixth grade and below. It was also worn by the imperial guards as part of their uniform. Originally an emblem that marked the highest deeds of valour, in the later years of the empire, it became a routine reward for service by all military officers of the sixth grade or lower. The blue feather was appropriate as a military emblem, as it was said to come from a species of bird noted for its courage. The actual award was variously described as a pheasant feather, blue-black in colour, or a combination of horsehair and quills from a crow's tail. The blue feather was longer than the peacock feather, nearer 0.6m in length, but it was worn in an identical way. The blue feather was replaced by a sable tail when on active duty.

During the nineteenth century and possibly earlier, suitably inscribed silver plates were also awarded in recognition of bravery. One such was taken by British troops in 1841 and remains in the British Museum.[10] The commander would bring a number of such plates with his train when on campaign to award worthy soldiers.

For most ordinary soldiers, including those of the Green Standards, the various awards for those who played chief or second parts in breaking the enemy line in battle, storming towns, boarding enemy ships, and capturing enemy towns, ships, or bodies of troops probably were most important. Monetary awards were given for combat wounds. These came in a number of degrees depending on the severity of the wound and the rank of the soldier who had been wounded. A bannerman might receive 50 taels for a wound of the first degree, while a Green Standards soldier might receive but 30 taels for the same type of wound.[11] This reward, however, should be compared to the normal monthly pay for the lower ranks, which ranged from one to two taels in the Green Standards (see below).

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[10] British Museum, Index No. M9102.

[11] Wade, 'Army of the Chinese Empire', p.398.

7

Command, Training, Strategy, and Tactics

Officers

The Qing officer class consisted of officials known to the West as 'mandarins'. The word 'mandarin' (Chinese: *guan*) is derived from the Portuguese word '*mandar*', meaning 'to command'.

There were nine grades of mandarins. The Qing distinguished between civil and military mandarins. The civil mandarins were selected in an elaborate examination system that emphasised traditional literary skills such as the ability to read, understand, and discourse on the ancient Confucian classics and similar literature. Anyone who could raise the funds to study was eligible to take part in the literary examination, and those who successfully passed were posted to suitable administrative duties in the provinces or in the case of those truly gifted (or influential) directly to the capital. Many thousands of students took part in each examination, and these were organised at regular intervals.

The military employed an examination system similar to the civil one but with greater emphasis on physical ability than the literary skills all-important for the civil career. The aspiring military officer was otherwise examined in the same way as his civil colleagues. Practical ability in horseback riding, swordsmanship and archery, both on foot and on horseback, was required for the entry-level tests. By 1694, the Kangxi emperor insisted that military officers should primarily be selected on the basis of their skills in horsemanship and archery. To pass the open provincial examination, the bannerman then had to contribute a brief examination essay in either Manchu or Mongolian to show a sufficient knowledge of military history. Knowledge of Chinese was also encouraged.[1] Successful graduates might be selected for the imperial guard regiments or be appointed captain or major of a Green Standards unit.[2]

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[1] See, for example, Powell, *Rise of Chinese Military Power*, pp.18–19; Wakeman, *Great Enterprise*, vols 1–2, p.1041; Spence, *Emperor of China*, pp.18, 50; Crossley, *Translucent Mirror*, pp.287–88.

A formal examination, however, was not required to become a military officer. In 1728, the Eight Banners Officers' Schools were established in Peking to provide education to selected officers. Their rules also served as a means of maintaining the Manchu and Mongol identity in the Qing military, which, to a large extent, had become Chinese in ethnic composition by then. For this reason, rules stipulated that 60 percent of all matriculants be Manchu (by then at most 40 percent of all bannermen), 20 percent Mongol (by then perhaps 10 percent of all bannermen), and 20 percent Chinese (at least 50 percent of all bannermen). Their programme included Manchu and Chinese language skills, astronomy, and mathematics, and there were frequent and serious tests in horsemanship and archery. In 1796, officers' schools were also established in the provincial garrisons. After the Opium War, courses on foreign weapons were added to the officers' schools.[3] It was also possible to rise through the ranks. From 1800, garrison officers were ordered to identify talented young boys out of the sons of bannermen, preferably one out of every five or six, who would receive intensive vocational instruction in Manchu and military skills from their squadron warrant officers.[4] Other ways to rise through the ranks included to receive promotion and appointment as a reward for bravery in war or to purchase rank and title. It was also common, in particular in the Green Standards, to be promoted by favour of a superior, for instance, by acting as a servant, orderly, or even the outright favourite of a senior officer.[5] Officers who were commissioned in these ways seldom had any significant theoretical skills. Even those who passed the formal military examination generally had significantly less education than those who went for the civil examination. Many were indeed dropouts from civil studies. A military degree was accordingly never held in high esteem, and lower ranks of military mandarins were regarded as less prestigious than the corresponding civil ones. Such men were, for instance, supposed to ride on horseback instead of in the more dignified (but less comfortable) palanquin.[6] Comparatively few men with a civil degree joined the military. The result, some said, was that truly talented students aimed for civil careers while only

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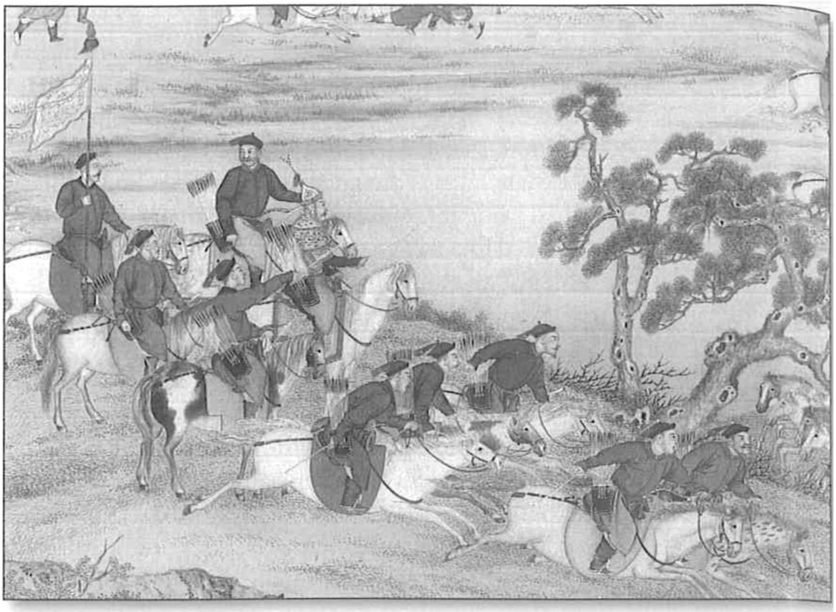
[2] Wade, 'Army of the Chinese Empire', p.392.

[3] Crossley, *Translucent Mirror*, pp.289, 309.

[4] Crossley, *Translucent Mirror*, p.310.

[5] See, for example, Cavendish, 'Armed Strength', p.711.

[6] Wade, 'Army of the Chinese Empire', p.397. A palanquin was usually carried by four or six bearers, except in the case of a governor general or general (*jiangjun*), who was entitled to eight. Senior officers used green palanquins, while those of a rank from major to major general used blue palanquins. Officers of lower rank would ride on horseback, not in palanquins. During campaigns, palanquins were generally covered in black oil cloth to protect against weather and wind. Heath, *Armies of the Nineteenth Century: Asia 2*, pp.20, 62. Another mark of high rank was to be accompanied by a parasol-bearer. The colour, embroidery, and size of the parasol indicated the official's rank. Captains and above were entitled to red parasols. Lower-ranking officers would have to be satisfied with plain, dark-coloured parasols. The parasol would come with a button of the same type as the one on the officer's hat.



Qing cavalry officers, Inner Asia. Qing commanders showed themselves extraordinarily skilled in the fluid cavalry campaigns that took place on the Inner Asian steppes. (Jean-Damascène Sallusti)

the dropouts, laggards, and the physically strong but untalented joined the officer class.[7]

The situation was quite different within the elite. Educational policies existed since the time of Hung Taiji that required the bannermen to become accomplished in both military and civil skills. They were to be expert horsemen, archers, and fighters with the sword and spear. They should read the classics on the art of war and be educated in strategy and all its inherent disciplines, including not obvious military disciplines such as meteorology. The civil skills included education in the Chinese classics, fine literature, and the histories of the Liao, Jin, and Yuan empires, that is, the earlier Mongol and Jurchen empires carved out of China, Manchuria, and Inner Asia. They were also to know mathematics, astronomy, and medicine. They were furthermore to accomplish these studies in at least two of the then three imperial languages of Manchu, Mongolian, and Chinese. The problem was, the ambitious education programme was never sufficiently funded and thus became the exclusive reserve of the banner elite – which thus became able to produce quite a few accomplished officers.[8] Although a number of untalented officers could and did rise to the position of general, the top commanders were generally appointed by the emperor and selected among both military and civil senior officials. Manchu senior commanders accordingly remained quite competent during the early period. Few were as blatantly corrupt or incompetent as many in the later years of the Qing empire. Some were quite able even then, such as Prince Senggerinchin, a Mongol banner officer and descendant of Chinggis Khan's brother. In the Taiping War, he not only defeated the Taipings in northern China but, in 1859, also soundly defeated and repulsed the British–French–American naval landing at Dagu ('the Taku forts').[9]

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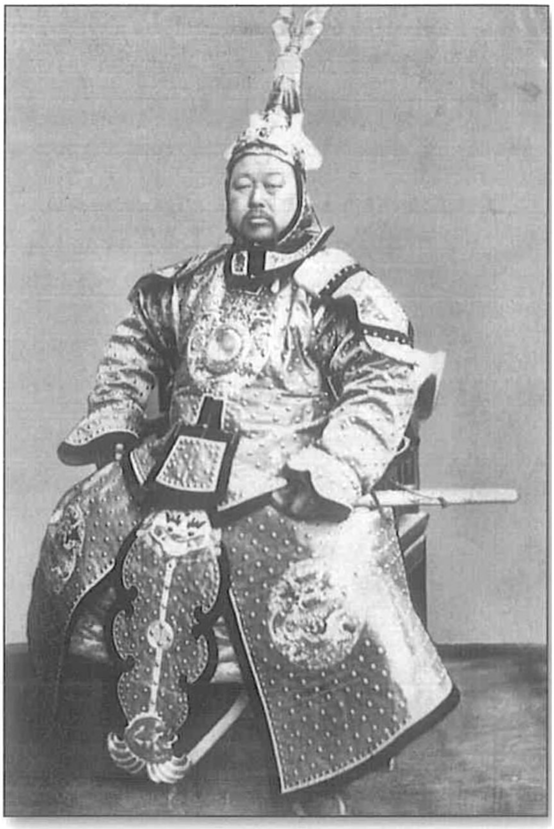
[7] Cromie, 'Military Forces', p.308.

[8] Crossley, *Translucent Mirror*, pp.286–87.

Each officer would bring a number of private retainers, in the early years commonly junior relatives, even young boys, or bond-servants, while on campaign. From 1644, the number of retainers allowed an officer depended on his rank. According to regulations from 1695, a lieutenant was allowed two retainers, while a general could bring 10.[10] By 1681, a brigadier would have seven or eight retainers.[11]



Prince Senggerinchin (1811–1865) of the Borjigid lineage of the Khorchin Mongols, c. 1860. Some British observers refused to believe that a Mongol prince could have handled infantry deployment, artillery, and forts in such an efficient manner and preferred to blame their defeat on a vague rumour that Russian 'priests or officers' had advised him because 'it was evident to all who had ever fought Asiatics, that no ordinary tactician was behind those earthworks' (Anon., 'The Fight on the Peiho', *Blackwood's Edinburgh Magazine*, 86:530 (December 1859), p.659). Known to Westerners as 'Prince Sang', 'San-kolinsin', 'Sang-ko-lin-sin', or even 'Sam Collinson', Senggerinchin fell in the Nian Revolt. (Anon.)

Men

The men who served in the Qing armies came from a variety of backgrounds. The bannermen had, early in the period, turned into professional, highly motivated, and competent soldiers. They remained an extremely potent force for almost 200 years, with a reputation for ferocious charges into the enemy. Hung Taiji proudly noted of his men, 'Because [our soldiers] are skilled at mounted archery, they are victorious in fierce combat. When they attack cities, they take them. The people of the empire say of our soldiers, "If they stand, they will not waver; if they advance, they will not retreat". Their reputation is awesome, and nowhere more than in the vanguard'.[12]

The military value of the bannermen only decreased by the latter half, perhaps the very end, of the eighteenth century, a time when the Qing army suffered from a lack of funds. The main reason for the decline was the 1763 decision to settle the bannermen apart from their garrisons and permit them to take up trades, something for which they were utterly unprepared and which naturally diminished their martial spirit and ability. This decision was an attempt to save funds as well as alleviate poverty among bannermen. Means had already been taken to persuade the banner populations in garrisons throughout China to migrate to Manchuria, where they had not been living for many generations, but this reform had utterly failed. In another disastrous attempt to solve the budgetary crisis, the Qing government greatly reduced the number of highly paid officer stipends while slightly increasing the considerably lower stipends for enlisted bannermen. This only resulted in a reduction in the number of banner officers, which further decreased the military value of the banner units. The effect of the combined 'reforms' over a couple of generations turned the efficient banner forces into a social problem. By the 1820s, the banner population was more known as street beggars, bandits, opium addicts, and members of the urban poor than soldiers.[13]

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[9] Many contemporary Britons could not accept that a Mongol prince had defeated them, preferring to believe in unsubstantiated rumours of Russian involvement in and arms deliveries to the Qing defences. Such rumours were commonplace within the British military at the time since it was easier to blame the geopolitical rival that, by then, had replaced France as Britain's traditional bogeyman than to admit one own's shortcomings. Lamprey, 'Economy', p.408. Senggerinchin was himself repulsed when the British and French repeated the attempt in the following year with some 18,000 ground troops. Robert Swinhoe, *Narrative of the North China Campaign of 1860; Containing Personal Experiences of Chinese Character, and of the Moral and Social Condition of the Country; Together with a Description of the Interior of Pekin* (London: Smith, Elder and Co., 1861), p.186. For a stirring account of the battles, see A. H. Atteridge, 'The Storming of the Taku Forts: June 25, 1859 – Aug. 21, 1860', in A. Forbes et al. (eds), *Battles of the Nineteenth Century* (London: Cassell & Company, 1896), vol. 1, pp.27–34.

[10] Fang, 'Technique', p.205.

[11] Di Cosmo, 'Elephants', p.5. Compare Di Cosmo (trans.), *Diary*, pp.27, 55.

[12] Rawski, *Last Emperors*, p.44.

Other Chinese soldiers were generally recruited among the rural poor, convicted criminals, and ruffians eager for loot but less eager for military discipline. They were accordingly usually of poor quality and prone to retreat in the face of the enemy unless compelled in a suitable way.

The non-bannerman Mongols, meanwhile, were not the Mongols of Chinggis Khan. Although as hardy and mobile as their ancestors, they were fragmented and recruited as nomad auxiliaries. By this time, they operated in a very similar manner to Russian cossacks: successful at times, hard to control always, and eager to loot whenever there was a chance.

A Mongol, however, was regarded as equal to no less than three Chinese in military skills. They were accordingly frequently recruited, and some Qing armies consisted almost exclusively of Mongol auxiliaries.

Tibetans, too, served as Qing auxiliaries. They as well were regarded as a martial race, and one Tibetan was said to equal two Chinese in military skills (it is telling that the Chinese considered every neighbouring people, including the southern indigenous tribes within China, to be more warlike than themselves). However, we have seen that the Tibetans generally served only as local constabulary. Their importance to the Qing field armies was accordingly small compared to that of the Mongols. Tibetans were, in fact, almost indistinguishable from other Qing soldiers when they served in Qing regular armies. Tibetans may also have served, together with Chinese from certain regions, as non-bannerman Qing cavalry. Such forces, however, were of more limited usefulness, whether as skirmishers or shock troops.

As for training, the early bannermen trained regularly and took part in the annual grand autumn hunts that the emperor organised. These elaborate events demanded the work of thousands of soldiers, and the Manchu emperors – as Chinggis Khan before them – found that a grand hunt proved almost as good an opportunity to train the men as a real campaign.

In training, the emphasis was on archery and horsemanship. Hung Taiji ordered his bannermen to be divided into three classes, depending on their ability to hit a target on foot and on horseback. Those who failed to make it into the lowest class were disciplined. If 10 or more men in a squadron failed to pass, the squadron commander was demoted. If 600 or more failed to pass in a banner, the banner commanders were punished.[14] The military skills of the Manchu armies, including the Green Standards troops, were also regularly tested during imperial tours throughout the empire and the triennial reviews, the Grand Inspections (*dayue*). These included demonstrations of cavalry, archery, and combat techniques. After the reign of the Qianlong emperor, such inspections were no longer regularly held. The military reviews were occasions for the emperors and officers to wear elaborate ceremonial armour.

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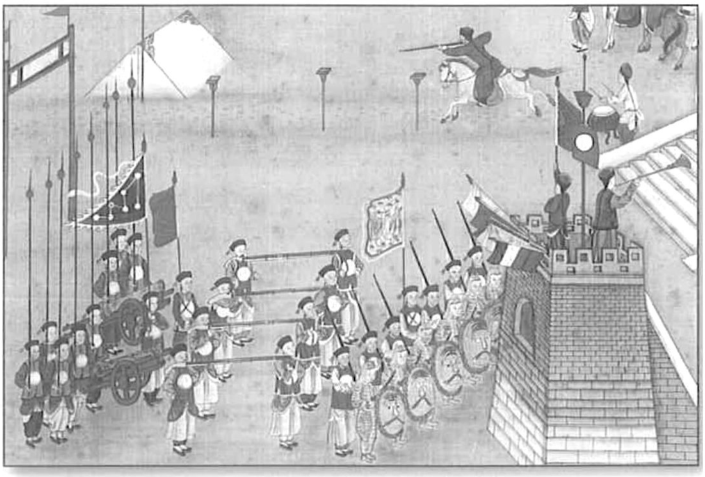
[13] See, for example, Crossley, *Manchus*, pp.33, 83, 130, 153–54.

Training of other soldiers was considerably less regular, frequent, and efficient, if training took place at all. As the empire declined, an increasing number of units forgot their military skills because of a lack of practice. Weapons were then seldom maintained and often in poor condition.

Before 1644, each squadron supplied its soldiers with weapons, horses, and equipment. Each soldier would bring a junior member of his family or a bond-servant to take care of horses, find provisions, and other chores. Captives and captured animals as well as other spoils of war were distributed among the soldiers of the squadron as rewards. From 1644, pillaging was no longer allowed, and the soldiers began to receive monthly payment in silver and rations, although they continued to receive their shares of the spoils distributed at the end of each successful campaign. Horses and equipment were then supplied by the state. The number of retainers and horses were, from this time, limited to four horses (two for riding and two pack horses) and one retainer per soldier. In the early years, horses were available in sufficient quantities. Towards the end of the empire, however, a shortage of horses forced many bannermen to fight on foot.[15]

The soldiers' pay appears to have been paid out every one or three months. In the Green Standards, the normal monthly pay ranged from two taels for a cavalryman, or one-and-a-half taels for a regular infantryman, to one tael for a garrison infantryman or marine.[16] However, each soldier, at least within the Green Standards, had to pay for his uniform, for which he usually got into debt with his unit command. Soldiers also needed to provide their own necessities, such as footgear, socks, bedding, cooking utensils, and so on. Bannermen received higher pay than auxiliaries. So did those on active service, in



Qing soldiers going through their drills, as depicted by the Qianlong emperor's court artist Xu Yang. Detail showing tiger men and soldiers armed with matchlock muskets, long jingals, and field artillery. In the background, a cavalryman fires his musket at the gallop. (Xu Yang)

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[14] Rawski, *Last Emperors*, p.44.

[15] Fang, 'Technique', p.205. On the distribution of spoils in 1681/1682, see, for example, Di Cosmo, 'Elephants', p.10; Di Cosmo (trans.), *Diary*, p.72.

[16] Wade, 'Army of the Chinese Empire', pp.402–13 (for the pay of officers of various ranks), 414.

Imperial guardsman, c. 1877. (Thomas Child)

Tibet, and in a few other hardship regions, who received double pay and rations. In Tibet, a Qing soldier's monthly pay (certainly in 1901 and probably much earlier as well) was four taels, which was not regarded as enough for his daily food and necessities. This caused hardship since the price of the food provided to the soldier was, in Tibet at least from 1789, deducted from his pay.[17] Both bannermen and Green Standards troops were liable to military service between the ages of 16 and 60.[18]

The family of a soldier killed in action was entitled to a monetary award depending on the dead soldier's rank: for a banner cavalryman, 150 taels; for a Green Standards cavalryman, 70 taels; and for a Green Standards infantryman, 50 taels. The dead man's son might also be elevated in rank or suitably employed. From 1784, at least, the parents of a private soldier killed in action were entitled to being provided for by the state.[19]

Horses

The Manchu army was, from the outset, a cavalry army and, before its period of decline, always included a high percentage of cavalry.

Before the conquest of China, horses were supplied by the soldier's squadron. From 1644, the soldier received his horses from the state. Most would, as noted, have four horses, two for riding and two pack horses, while officers were likely to have more.[20]

Bannermen and Mongols were mounted on sturdy steppe horses. Cavalry horses from Mongolia and Manchuria were generally small, averaging 12.5–13 hands (1.27–1.32m).[21] Brown (bay), white, beige (dun), grey, pale grey, and piebald were common colours, as were chestnut and black. The duns were perhaps the most striking: mustard coats with black mane and tail, black stripe along the back, and often white stockings. A portrait of the Qianlong emperor in full ceremonial armour shows his horse as white and reddish brown. In another painting, he rides a white horse.

The horses were never shod. Instead, special horseshoes provided with wooden strips or iron cleats were provided as needed.[22]

As for saddles and harnesses, the Manchu army showed a great variety in colours but not in style, which was fundamentally identical for everybody from the lowest bannerman to the emperor. In Castiglione's paintings, ordinary Manchu saddles are commonly reddish brown, on beige saddle blankets, while the saddles of imperial guardsmen are beige, dark green, brown, or some shade of blue. Horse harness is typically brown, in varying shades, with beige straps, joined behind the horse's tail with a piece of red leather. More elaborate saddles are, for instance, red or dark blue, in either case with black borders. The borders might be decorated with big whitish dots. The portrait of the Qianlong emperor in full ceremonial armour depicts a brownish red saddle blanket with black inner border and decorations in crimson, black, white, and greyish green. His horse tassels are crimson, and the remaining harness is yellow. Judging from a preserved saddle in the Palace Museum, Peking, imperial saddles could also be yellow with black borders and many decorations in black, blue, red, green, and other colours. A Manchu saddle was heavy, with its saddlecloth easily weighing as much as 12kg or more. It had a high seat, and, before and behind, there was a high ridge of wood that formed the tree. A large piece of leather formed a flap that covered much of the horse's flank. The saddlecloth was made of thickly padded cloth.[23]

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[17] Chen, *Qing Court's Troop Deployment*.
[18] Cavendish, 'Armed Strength', pp.706, 711; Lamprey, 'Economy', p.414.
[19] Wade, 'Army of the Chinese Empire', pp.398, 402.
[20] Fang, 'Technique', p.205.
[21] Lamprey, 'Economy', p.426.
[22] Di Cosmo, 'Elephants', p.12; Di Cosmo (trans.), *Diary*, p.61.

On the 1751 handscroll by the court artist Xu Yang, painted to commemorate the Qianlong emperor's tour through Hebei, Shandong, Jiangsu, and Zhejiang provinces, the emperor himself as well as several members of his entourage are depicted. The emperor is mounted on a white horse, decorated with tassels of what appears to be red tufts of horsehair, topped with gilded metal. His lower bridle is white, while the upper is pale yellow. His saddle blanket is yellow, too, with red and white dragon patterns and a greyish border. The saddle itself is red, with gilded decorations. His soldiers are mounted on pale greyish horses with similar harness gear to the emperor. The saddlecloths, however, are not of a uniform pattern but slightly different in decoration if not in colour (pale grey or beige). Saddles are either pale red or greyish brown. The lower bridles are again white, but the upper ones are dark, tanned, and of natural leather colour. A Manchu bridle was shaped much like a European one, with a snaffle bit with large rings for movable cheek pieces.

The Manchu stirrup was always of massive iron, with a large, round flat base that easily enabled a horseman to stand in the stirrups, for instance, while shooting.

The Manchu did not use spurs. Instead, in similarity to other Inner Asian horsemen, a Manchu relied on a short whip, described as made of short thongs of thickly plaited hide with a short handle about 0.3m in length.[24]

The Manchu soldiers took good care of their horses. The Kangxi emperor himself insisted that his men tend to their horses lovingly. The horses should be covered up if there was a risk for rain, and they should not be given water immediately after a hard ride, as this could make them ill. On the other hand, the emperor also saw it necessary to proscribe the looting of grain from civilians to feed the horses, which indicates that the Manchu soldiers knew well that horses on strenuous campaigns need more sustenance than from grass alone.[25]

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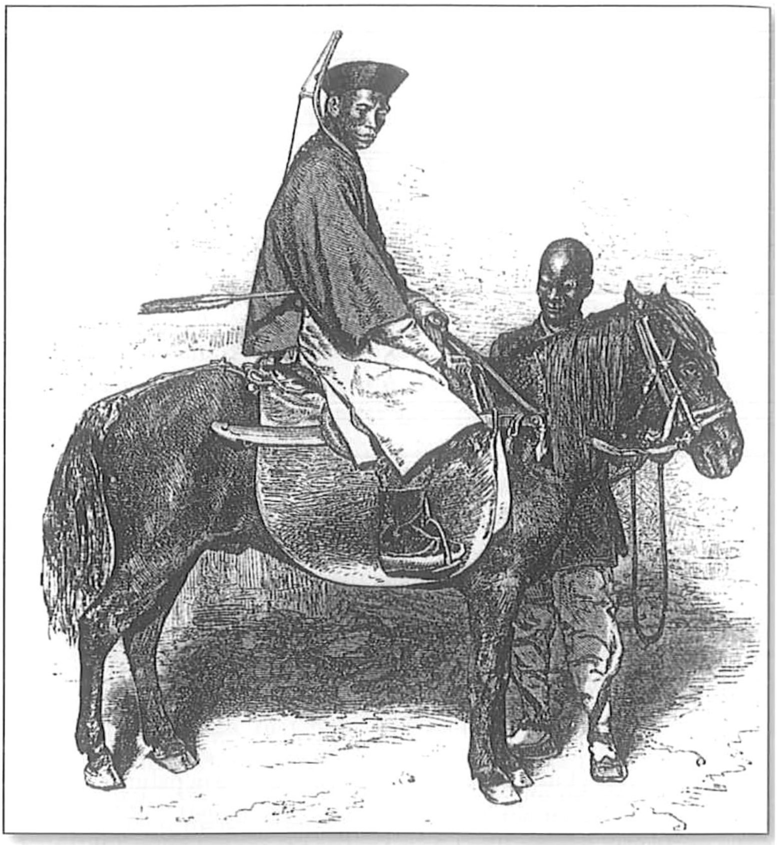
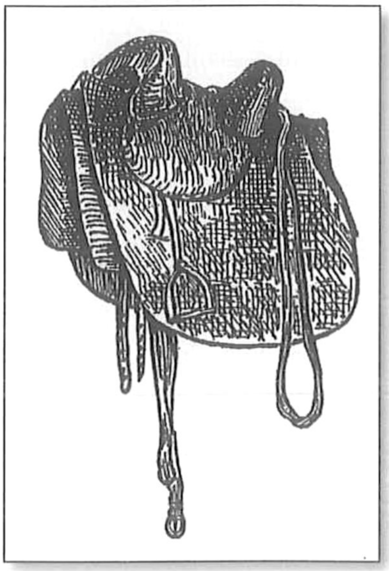
[23] Lamprey, 'Economy', p.426.

[24] See, for example, Martini, *Bellum Tartaricum*, cited in Struve, *Voices*, p.51; Lamprey, 'Economy', p.426.

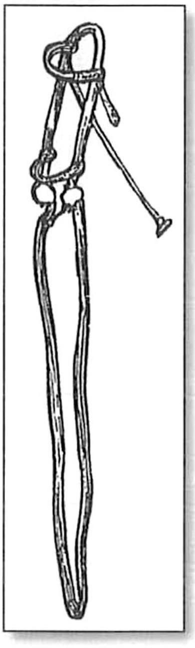
[25] Spence, *Emperor of China*, pp.16–17.



Bannerman on horseback, late nineteenth century. This depiction probably corresponds to later practices but not the banner army in its heyday. The soldier lacks both bow case and quiver, and he carries his sword under the saddle. (Anon.)



Saddle. (Jones Lamprey, 1867)



Bridle. (Jones Lamprey, 1867)

Strategy and Tactics

In the Qing empire, grand strategy was the responsibility of the emperor. When a military campaign was to be undertaken, he would issue an edict to the commander-in-chief of the relevant theatre of operations. If no such commander existed, he would assign one. The imperial edict would outline the main objectives in the campaign. The theatre commander-in-chief would then assemble his field commanders to draw up the actual plan for the campaign.[26]

The arts of strategy and tactics were highly developed in China, and the Manchus successfully combined the elaborate Chinese theories on converging attacks, surprise, and independent manoeuvring with their traditional, ancestral mobility and practical experience in what was in essence the same system of military art. The Manchu and Mongol horse archers were expert in the use of such typical steppe stratagems as the ambush, feigned retreat, encirclement, use of missile weapons before closing in for hand-to-hand combat to wear the enemy down until his defeat was almost certain, and the diligent use of scouts and spies for reconnaissance (more on which below). However, the Manchus realised the emerging weaknesses of the steppe nomads: their vulnerability to heavy firearms and fortifications.[27] In 1625, Nurgaci already advised a Khorchin Mongol chief to build a fortress – although the Mongols found the suggestion unpalatable and did not heed the advice. In 1627/1628, Hung Taiji again advised his Khorchin Mongol allies to build three fortresses in good defensive locations close to each other in anticipation of a coming Chakhar Mongol offensive. Not only would such a defensive line on the steppe be an efficient strategic means to counter the Chakhar, he pointed out, but the fortresses would also serve as fixed points to which Hung Taiji could rush Manchu units when the Chakhar attacked, without losing time searching for the highly mobile steppe armies. Hung Taiji realised that (1) the Chakhar would probably be unable to storm such fortifications, (2) the Chakhar would be tied up by this defensive line so that the Manchus would have time to bring reinforcements in time to defeat them, that is, the Khorchin would function as a buffer, and (3) it would be easy to move Manchu units into locations that were known in advance.[28] It is significant that, when the Qing almost a century later, from 1717 onwards, did set out to settle the steppe frontier with colonists instead of merely attempting to keep their Mongol allies under control, they embarked upon just such a programme of building fortresses that Nurgaci and Hung Taiji had envisaged.[29]

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[26] See, for example, Di Cosmo, 'Elephants', p.7.

[27] Michael Fredholm von Essen, *Nomad Empires and Nomad Grand Strategy: The Rise and Fall of Nomad Military Power, c. 1000 BC – AD 1500*, Asian Cultures and Modernity Research Report No. 9, Stockholm University, January 2005, 'Gunpowder and the End of Nomad Military Power: The Military Revolution That Really Mattered', *Arquebusier*, 28:5 (2005), pp.2–9, 'The Rise and Fall of Nomad Military Power, Part 1: c. 1000 BC - 1200 AD', *Slingshot*, 337 (2021), pp.3–17, and 'The Rise and Fall of Nomad Military Power, Part: 2: c. 1200 AD - c. 1600 AD', *Slingshot*, 338 (2021), pp.2–15.

[28] Nicola Di Cosmo, 'Military Aspects of the Manchu Wars against the Čaqars', in N. Di Cosmo (ed.), *Warfare in Inner Asian History (500-1800)* (Leiden: Brill, 2002), pp.351–54; Di Cosmo and Bao, *Manchu-Mongol Relations*, p.37.

The imperial Manchu and early Qing armies were successful and highly experienced, but we should not be tempted to see in them quite the mobility and range that characterised the earlier imperial Mongols. Even the Mongols incorporated into the Qing army, though they still retained their customary mobility and hardiness, were no match in steadiness for their more highly organised ancestors. Besides, what advantages the early Manchus had enjoyed over the native Chinese was, over time, diminished because of a lack of training. However, the Qing armies, especially those in the north, remained considerably more mobile than the cumbersome traditional Chinese infantry armies. On its way through contested territory to Peking in early summer 1644, the Qing army, which also included infantry, averaged about 40km per day on the march.[30] In 1681, a combined Qing infantry and cavalry army, which also included artillery and a supply train, in the mountainous and distinctly difficult terrain of Yunnan in south-western China averaged about 15km per day, even though the men on some days only managed 10km. However, even then, a cavalry regiment could cover 300km in 14 days, at an average speed of over 20km per day, and on one occasion travelled 50km in a day.[31] In comparison with other contemporary armies in China and elsewhere, these figures suggest an impressive rate of mobility.

The Qing not only formed ad hoc field units, as noted, from the available recruitment base of the socio-military banner formations, they also, in anticipation of each major operation, chose such field units from the available higher formations in the theatre to form equally ad hoc combat units to achieve the tasks needed to secure a successful outcome. When this particular combat objective had been achieved, the combat unit could be broken up, and the soldiers reassigned as needed to other commanders for other operations. The combat units were formed from both banner units and Green Standards units, disregarding the fact that these, in principle, were separate bodies of men. At least as long as the wars of conquest continued, bannermen and Green Standards soldiers always fought together.[32]

When studying the battlefield tactics used by the Chinese and in extension all those East Asians who were culturally influenced by them, we should realise that many of the elaborate formations and tactics described in ancient military manuals were no more than paper constructions, designed to ensure good fortune according to the laws of astrology. Rational and more straightforward formations were certainly both known and used, one suspects far more frequently than the obscure formations illustrated in the manuals. Many Manchus, including the Kangxi emperor, realised that most manuals were obsolete and are known to have expressed their contempt for them. The Kangxi emperor, in particular, advised caution. He once concluded, 'The so-called Seven Military Classics are full of nonsense about water and fire, lucky omens and advice on the weather, all at random and contradicting each other', adding, 'I told my officials once that if you followed these books, you would never win a battle'.[33]

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[29] Perdue, *China Marches West*, pp.232–33, 328.

[30] Wakeman, *Great Enterprise*, vols 1–2, p.314 n.275.

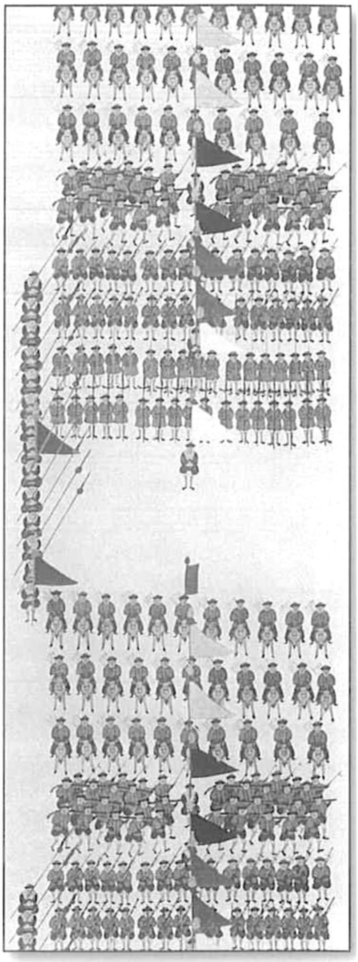
[31] Di Cosmo, 'Elephants', pp.12–13; Di Cosmo (trans.), *Diary*, p.34.

[32] Di Cosmo, 'Elephants', p.7; Di Cosmo (trans.), *Diary*, p.63.

Nonetheless, we have to investigate what the manuals say. From 1858 onwards, Russian military officers claiming to travel for personal reasons made regular, virtually annual journeys of reconnaissance throughout the region south of the Amur. Their reports were not published but, especially in the period 1882–1891, printed by the Russian General Staff, under the auspices of Dmitriy Vasil'yevich Putyata (1806–1889), who also copied a number of illustrations from Chinese military works then used by the Qing.[34] According to these notes and illustrations, Qing forces on foot frequently operated in three-man teams, consisting of one archer, one man armed with a glaive, and one soldier with shield. In this way, the Russian noted, the team members supported each other. Whether this formation ever was used in real operations is unknown, but it may have been used by skirmishers. Putyata also illustrated a unit of 81 infantry matchlockmen, divided into three lines, deployed behind a half-moon-shaped screen of skirmishers (with the centre rather than the wings extended), and with rear support by sword-and-buckler men.[35] Again, we cannot say whether the formation was ever used in the field, although it appears possible as infantry musketeers had a tradition of advancing to fire their weapons one rough line at a time, then retiring to reload while awaiting their turn to fire again. Such tactics were at least used by the Ming and earlier Chinese armies.[36]

Putyata's illustrations lead us to the classification of soldiers employed in the ancient battle manuals. In Chinese, the word '*bing*', generally translated as 'soldier', originally meant 'weapon'.[37] This explains the categorising in classical Chinese warfare of troops according to which weapons they used, a classification that has nothing whatsoever to do with real battle formations but gives some clues as to the armament of different units. We hear of formations consisting of:[38]

- Spearmen (*chang qiang*)
- Men with glaives (*chang da dao*)
- Shield bearers (*tengpai*), called 'tiger men' in the West
- Musketeers (*niaoqiang*)
- Men with jingals (*taiqiang*)
- Archers (*gongqiang*)
- Artillery (*da pao*)
- Cavalry (*ma bing*).



Column of Peking banner units consisting of men armed with, from front to rear, tridents and spears, matchlocks, jingal crews supported by spearmen, and cavalry, with flank support by men armed with long spears, eighteenth century. The ratio between jingals and matchlocks would seem to be 12 jingals for each 32 matchlocks, or 3:8. (*Bibliothèque nationale*, Paris)

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[33] Spence, *Emperor of China*, p.22.

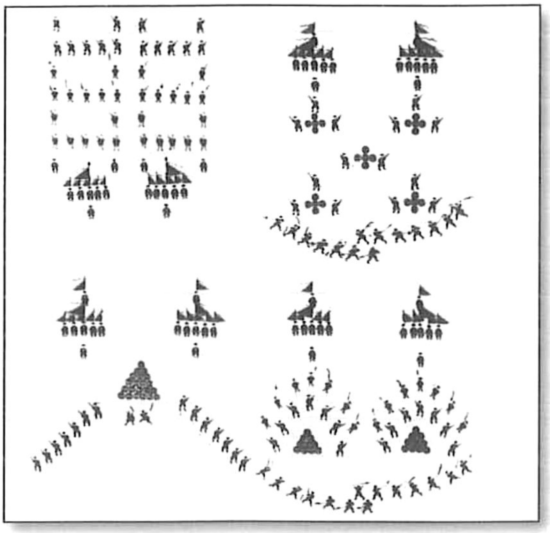
[34] Anon., 'Russo-Chinese Relations, 1224-1912', *Edinburgh Review*, 215:439(January 1912), p.206.

[35] Needham et al., *Science and Civilisation*, vol. 5, part 6, p.63.

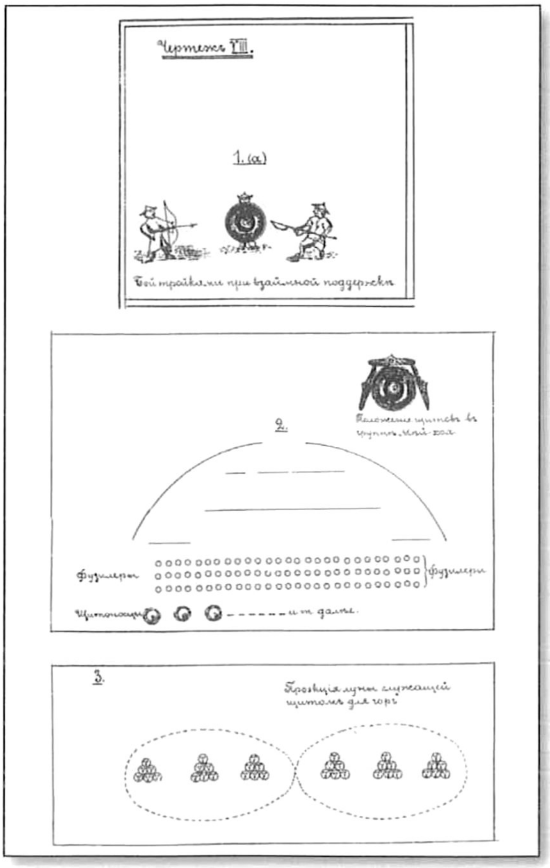
[36] See, for example, Cheng and Zhong, *Ancient Chinese Weapons*, pp.210, 237.

[37] Amiot, *Art militaire*, p.334; Werner, *Chinese Weapons*, p.9.

[38] See, for example, Amiot, *Art militaire*, p.334. Unlike Chinese-language sources, Amiot did not specifically mention men with jingals. He also wrote, '*chang dao*', which would indicate men with longswords, but this is presumably a mistake for '*chang da dao*' (men with glaives).



Qing battle formations. (Lenin Library, Moscow)



Some of the Russian General Staff's illustrations of Qing formations. (Dmitriy Putyata)

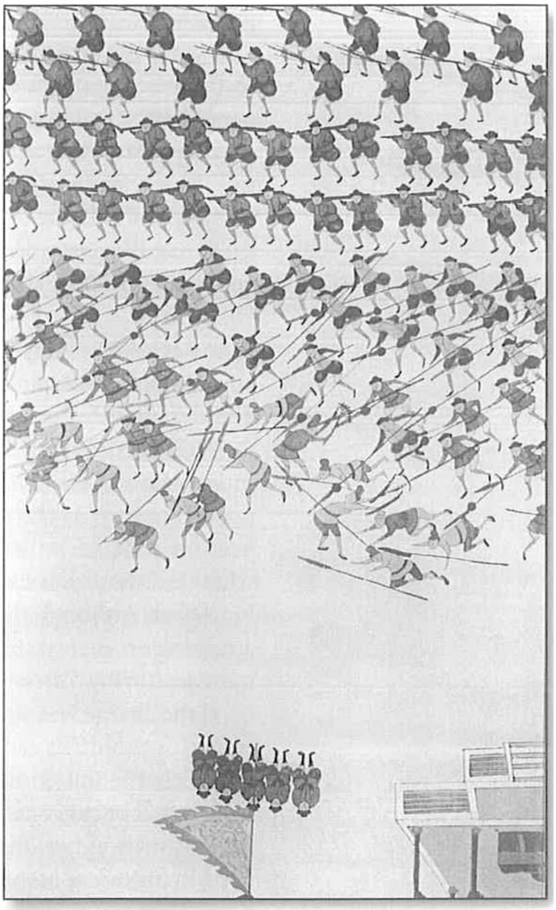
An eighteenth-century illustration of a battle or, far more likely, parade formation of Peking bannermen in *Bibliothèque nationale*, Paris, depicts a column of units consisting of men armed with, from front to rear, tridents and spears, matchlocks, jingal crews supported by spearmen, and cavalry, with flank support by men armed with long spears. Based on this illustration, the ratio between jingals and matchlocks would seem to be 12 jingals for each 32 matchlocks, or 3:8. This ratio, which is not contradicted by other sources, shows the importance of the jingal in the Qing army. Even as early as in 1622, it should be recalled, the ratio was one jingal to eight matchlocks, or 1:8. Another illustration from the same series depicts a similar unit in a display of military skills. In the front line, the men armed with tridents and spears engage the enemy, while the second line, consisting of the jingal crews, appears to be advancing, with rear support provided by a third line consisting of matchlockmen ready to fire to the flanks and rear.

Infantry Tactics

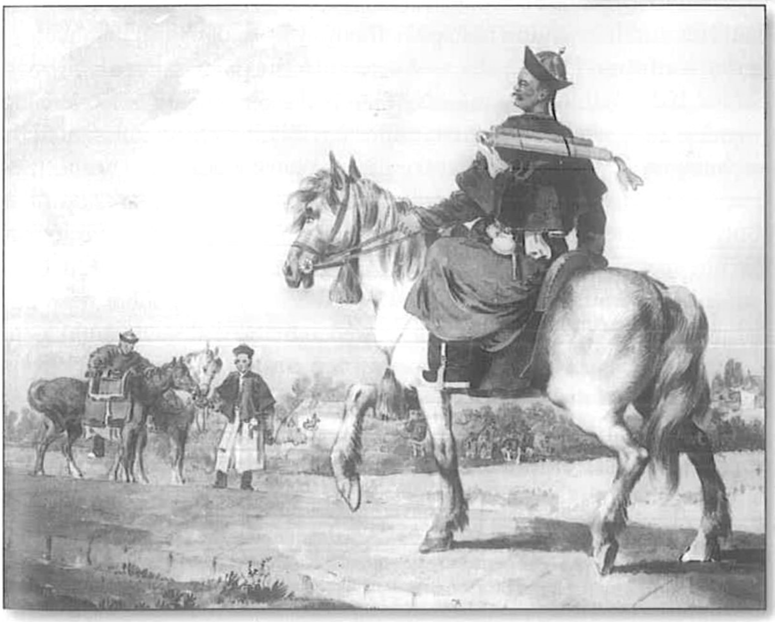
As for actual unit battlefield tactics, we have to distinguish between the cavalry armies, which operated in the north, and the predominantly infantry armies, which operated in the south and against internal enemies. An infantry army generally operated in a manner not very different from that of the earlier Ming armies. An army was typically organised into three to five main bodies, preceded by a horde of infantry skirmishers. Cavalry protected the flanks in whatever numbers were available.

The first to engage the enemy were invariably the infantry skirmishers, typically armed with swords and shields, although other weapons and even jingals were also used. The chief component of the skirmishers was a rank of tiger men in skirmish order. The rest of the army, meanwhile, advanced in parallel columns. Close to the enemy, they would wheel and join into a crescent formation made up of the infantry main bodies, with the wings thrust forwards to encircle the enemy or at least simultaneously threaten his front and flanks.[39] This was conventional steppe tactics, no doubt learnt from nomad horsemen. Any cavalry, and in particular any elite troops, deployed on the flanks to reinforce the effect of this maneouvre or alternatively behind as reserve.[40] Artillery was concentrated in the centre or alternatively spread along the entire front, interspersed with jingals or muskets to provide some protection against enemy assault. Unlike the Ming, who mostly used cannon and indeed any firearm as a defensive weapon, the Manchus never hesitated to use their artillery for offensive purposes.

Early in the period, missile troops generally seem to have taken cover behind those armed with spears or polearms. Such deployment is also, as noted, suggested by the eighteenth-century illustration of Peking bannerman formations in *Bibliothèque nationale*, Paris. In this way, a single rank of men with spears or polearms, followed by a single rank of archers (early in the period) or men armed with matchlock muskets and jingals, appear to have advanced behind the skirmishing tiger men. The aim was to use missile troops first to soften up the enemy, after which a determined charge would secure victory. Later, as increasingly more soldiers were armed with muskets, the front



The same Peking banner units as on p. 187 in combat training, eighteenth century. Rear support is provided by a third line consisting of matchlockmen ready to fire to the flanks and rear. (*Bibliothèque nationale*, Paris)



Banner officer. The document roll on his back contains an Imperial order. (William Alexander, 1793) ranks were generally made up of matchlockmen, archers, or both. If the unit was only armed with muskets, the tiger men would be followed by two to three ranks of musketeers. Based on nineteenth-century accounts, they commonly opened fire long before the enemy came into range and usually as a sustained barrage rather than regular volleys, so the effect was often indifferent. The matchlockmen rotated in their ranks to keep up the barrage. Having said this, we cannot be certain that practices were identical in earlier centuries. We have already seen that Korean musketeers trained to fire in volleys, and, before them, Ming Chinese military thinkers already argued for volley fire.[41]

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[39] Heath, *Taiping Rebellion*, p.40.

[40] Liu, 'Creation', p.59.

After the enemy had been worn down by missile fire, a general advance followed. An infantry attack was a wild charge of screaming men, accompanied by maximum noise. Drums, gongs, cymbals, and trumpets were all used during the charge, as was plenty of flag-waving (as much to intimidate the enemy as to raise the morale of one's own forces) and other posturing such as the making of faces to scare the enemy. Firecrackers were used as well, in imitation of gunfire. During the charge, any flank units, whether infantry or cavalry, would attempt to encircle the enemy to ensure his defeat. Although the early Qing armies were quite capable of successfully attacking an enemy, this practice in the nineteenth century degenerated into mere posturing, often without a serious intention to charge.

If the charge was successful, the soldiers generally dispersed to pursue the enemy or to loot his camp, unless restrained by an above-average commander. If the charge failed or the enemy merely stood firm, the attackers would instead fall back, generally in good order, and retreat. Each company would fire as they went, to discourage enemy pursuit. Firecrackers might again be used in imitation of gunfire to cover the withdrawal. By the end of the Qing period, pursuit became less common, as both soldiers and commanders grew more cautious and less willing to expose themselves to danger.

Infantry confronted by cavalry and caught in the open generally formed up in circles. If disciplined, the infantry then had a good chance of repulsing shock cavalry. They would, of course, suffer terribly if instead confronted by horse archers, especially if the infantry did not have a sufficient amount of missile weapons. However, the Qing, as noted, generally had a large number of not only matchlock muskets but also jingals, which had a range far longer than the bows of mounted archers. The Qing also employed a formation, recorded as being in use on more than one occasion during the nineteenth century but presumably of older origin, in which matchlockmen would form up into a series of revolving circles of nine men round a centre pivot of one man. Each matchlockman would then fire his weapon in turn, then reload as the circle continued to move around the centre pivot. The evolutions were performed to the beat of a drum, and, in 1816, a foreign observer, Henry

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[41] Tonio Andrade, 'The Arquebus Volley Technique in China, c. 1560: Evidence from the Writings of Qi Jiguang', *Journal of Chinese Military History*, 4 (2015), pp.115–41.

Ellis, noted that the soldiers executed this maneuvre with precision, loading and firing in rapid succession.[42]

The Manchu armies frequently built defensive field fortifications where they expected to fight. When in the vicinity of the enemy, Qing soldiers, even if cavalry, would lose no opportunity to entrench their camp. This practice had developed already by the second half of the seventeenth century, if not before.[43] In the 1860s, foreign military observers, such as Dr Jones Lamprey, a military surgeon who arrived in China in 1862, often marvelled at their extraordinary speed in building a marching camp:

> Immediately on the ground being selected by the commandant, all hands set to work with spades and picks, and make a breastwork and ditch in a few hours, then collecting a quantity of stakes, sharpened to a point at both ends, made from bamboos or stout branches of trees whichever is afforded by the locality in greatest abundance, they plant the ground thickly all round the intrenchment about knee high, for a distance of about 10 yards wide. They also sometimes adopt the plan of felling trees if near them, and covering the ground in front, the stems being towards the stockade – other contrivances are also used, for instance, numerous holes about 2 feet deep and 1 1/2 feet wide are dug close together, and at the bottom of these holes, sharp stakes of bamboo are stuck, so that a bare footed person stepping into one of these holes would be disabled at once, or even a person with shoes would suffer. . . .
>
> The encampment is composed of a series of entrenchments, each entrenchment being occupied by a separate regiment, distinguished by a flag or banner of an uniform colour and pattern of its own, and distributed in the proportion of one banner to every ten men. The regiments are generally small and number, on an average, about five hundred men each. An entrenchment for a regiment of this strength would occupy ground measuring 100 paces by 50. Its outline is generally a parallelogram in form, and consists of a breastwork, formed by the earth dug out in making the surrounding ditch. This ditch is sufficiently wide and deep to keep the men from breaking out of camp rather than for defence. Near the top of the fence there are apertures by way of embrasures or loop-holes for jingals or matchlocks to be fired through, and generally, at the angles, there are flanking defences. There is but one entrance, which is closed by a folding gate, and barred on the inside.
>
> The tents, as regards the two central lines, are usually found in regular rows, and about 9 feet equidistant from each other, but in other respects they are placed only as regularly as the formation of the ground and the number of tents occupying it permit. A wide pathway, dividing the centre lines of tents, leads straight from the gate to the tent of the commandant.[44]

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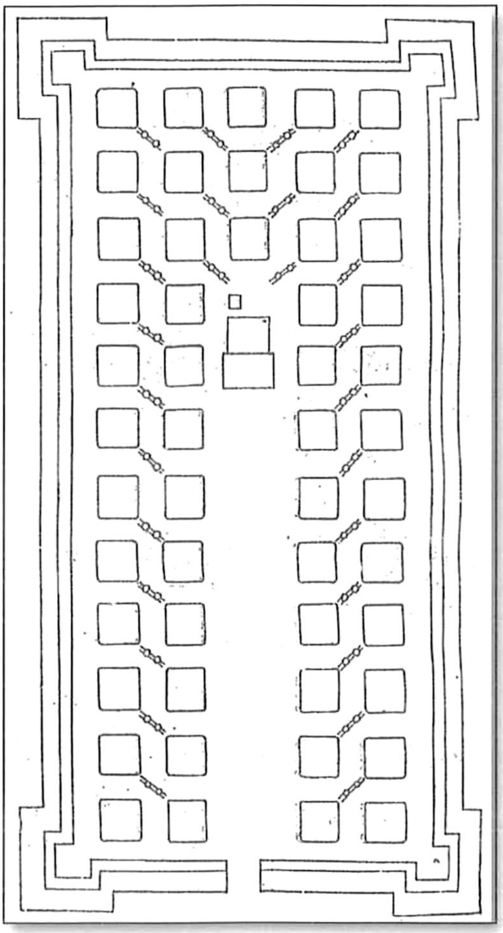
[42] Heath, *Armies of the Nineteenth Century: Asia 2*, p.31, citing Henry Ellis, *Journal of the Late Embassy to China* (1817).

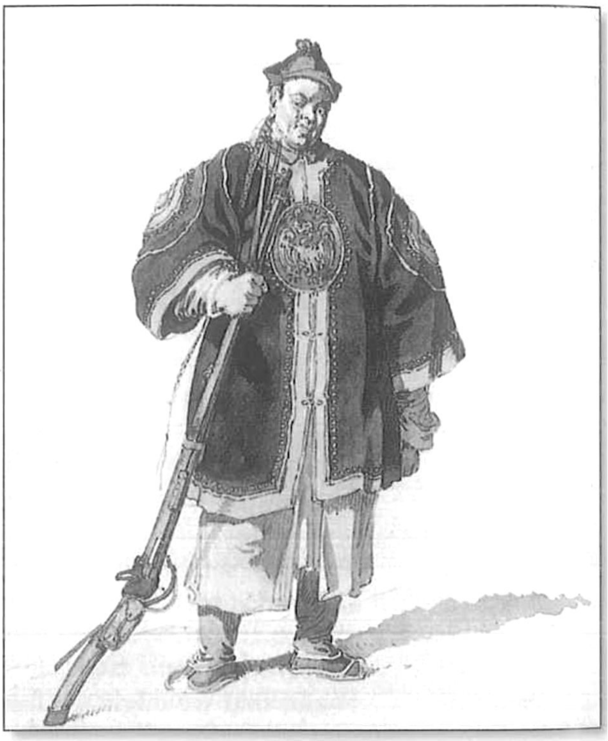
[43] Di Cosmo, 'Elephants', p.17; Di Cosmo (trans.), *Diary*, pp.50–51.

[44] Lamprey, 'Economy', pp.409–12. Lamprey was a military surgeon with experience from the wars in China as well as a keen observer, and he gives detailed descriptions of camps that he visited. In his paper, Lamprey described in great detail a number of Chinese military routines that, but for his work today, would be forgotten since they were not mentioned in contemporary Chinese

Lamprey also illustrated the ground plan of such a regimental encampment (*zhaying*), probably built by a Green Standards regiment. Each unit's entrenched camp would be within close range of at least two others so that the various camps formed a 'a sort of triangular or pentagonal fortress of each group for mutual support and defence' and would be able to deploy their firepower in support of each other. Another advantage was that it became very difficult to surprise an army thus entrenched since a surprise attack on one camp would alert the others, giving them time to prepare their defences.[45] The soldiers, if Manchu bannermen or Chinese, lived in low, wide woollen Manchu tents, white or grey in colour. Lamprey measured such a tent, finding its area to be 15 feet by 15 feet (4.6m by 4.6m). The tent itself was seven feet (2.1m) in height and 'nominally accommodated ten men with a sub-officer, who was in charge of it'. One may presume that this would, in reality, be the size used for the tents of the 15-man squads that also included coolies. This late in the period, the tent surveyed was actually made of thick cotton of foreign manufacture, but earlier woollen cloth was the norm.[46] Certain mid-



Ground plan for entrenched camp. (Jones Lamprey, 1867)



Banner infantryman. (William Alexander, 1793)

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works. The only real prejudice that Lamprey displayed was a deep conviction that rice and other Chinese foods were incompatible with the white man's stomach.

[45] Heath, *Armies of the Nineteenth Century: Asia 2*, p.35, citing William Mesny, who wrote in 1895–1905.

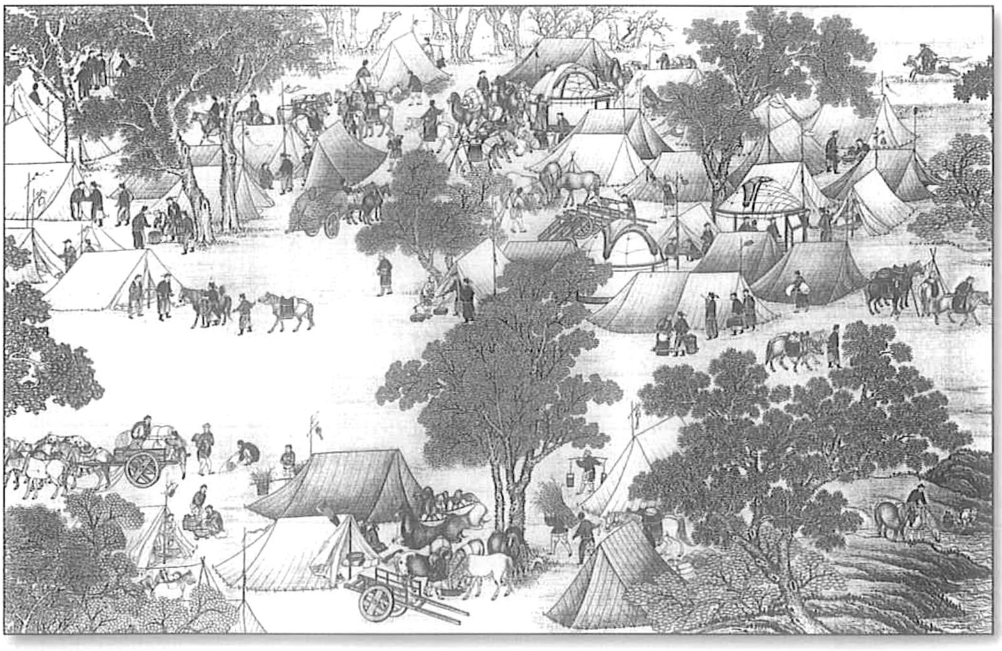
[46] Lamprey, 'Economy', p.410.

seventeenth-century observers also referred to leather tents, but this could be a misunderstanding.[47]

Cavalry Tactics

A northern cavalry army operated in a way indistinguishable from that of any steppe nomads, which was expected since the majority of the men and officers was often made up of Mongols, with any other soldiers being Manchu bannermen, both groups masters of steppe tactics.

Cavalry, whether Chinese-martial bannerman, Manchu, or Mongol, primarily fought as mounted archers. Even so, the men were commonly armed with lances as well and accordingly used shock tactics. The same held true for the armoured cavalry, which also carried both bows and lances. Qing cavalry in general employed aggressive tactics, charging the enemy when possible. The armoured cavalry in particular relied on shock tactics, apparently hitting the enemy at high speed.[48] Yet shock tactics do not necessarily depend on high speed. A Manchu record from 1633 notes that, during drills, their close-formation cavalry would charge at the trot. The conclusion would seem to be that armoured Manchu cavalry charged



Camp scene, eighteenth century. (Anon.)

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[47] Palafox y Mendoza, *History*, p.108.

[48] Di Cosmo, 'Military Aspects', pp.355–56.

the enemy at a relatively measured speed.[49] In addition, bannermen never hesitated to dismount to fight, whenever necessary.

This does not suggest that the Manchu cavalry army, in any way, was less aggressive than other steppe armies. In 1696, the Kangxi emperor led the relentless pursuit of the Oirat Mongol leader Galdan in person, leaving behind infantry and artillery in turn to move faster, until the Mongols were in full flight, abandoning supplies and dependents to the Manchus.[50]

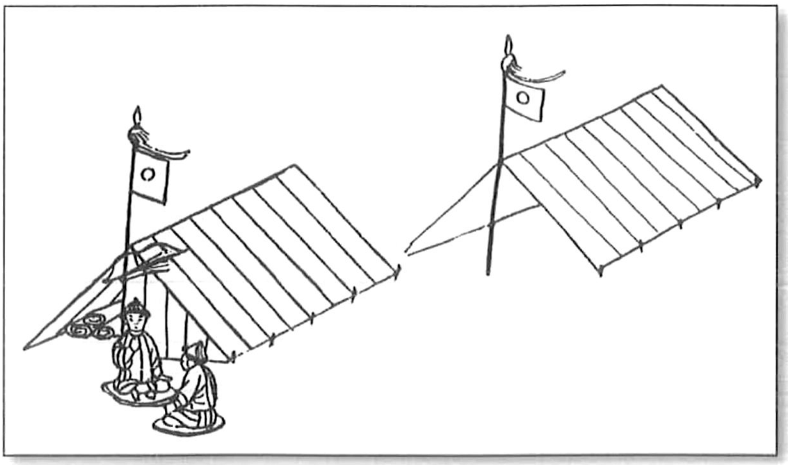
Infantry units also took part in the northern campaigns but never as the chief arm. If used, they functioned much as in the south.

A cavalry army was typically formed in a similar way to the infantry armies, into three to five main bodies of troops, preceded by a horde of skirmishers.

As in the south, the army would advance in parallel columns until close to the enemy, where the columns would wheel into a crescent-shaped battle line, with the wings thrust forwards to encircle the enemy. Artillery was, as in the south, concentrated in the centre or alternatively spread along the entire front, interspersed with jingals or muskets to provide some protection against enemy assault.

Qing cavalry would fire bows and matchlocks as they charged the enemy, then turn round, reloading as they galloped away at full speed.[51] Like earlier steppe nomads, they were adept at firing 'Parthian shots' while retreating. This procedure, a series of repeated charges and retreats, would continue until the enemy seemed sufficiently shaken or disordered for the Qing commanders to order a general advance. After the enemy had been thus softened up by missile fire, a general advance that turned into a determined charge followed. If the charge was successful, the men generally dispersed to pursue or to loot the enemy camp. If the charge failed or the enemy merely stood firm, the attackers would instead fall back in good order, either to launch a new attack or to retreat.

In the north, too, Manchu armies occasionally relied on defensive field fortifications, although not so much on the field of battle as in the fortification of their camp. A camp that was to be the centre of operations, and especially if it was also the seat of the emperor, was almost invariably fortified. The camp consisted of low, wide woollen Manchu tents of the type already described



Manchu tents, identified by flags. (Okada Gyokuzan, *Morokoshi meishō zue* 5, 1806) and Mongol-style round *ger* (yurts) of felt, with one or more great ones reserved for the emperor. Tents of distinct units or individuals were marked by small flags or other insignia. In an imperial camp, the tents of the imperial guards were pitched in a system of concentric circles around the square enclosure that contained the emperor's tents and *ger*. The Qing also used one-horse carts for members of the imperial family and important officials, generally yellow (for the imperial family) or of a dark colour. The horses used with these carts had trappings identical to guard cavalry saddles.

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[49] With thanks to Yang Saeam for noting this record.

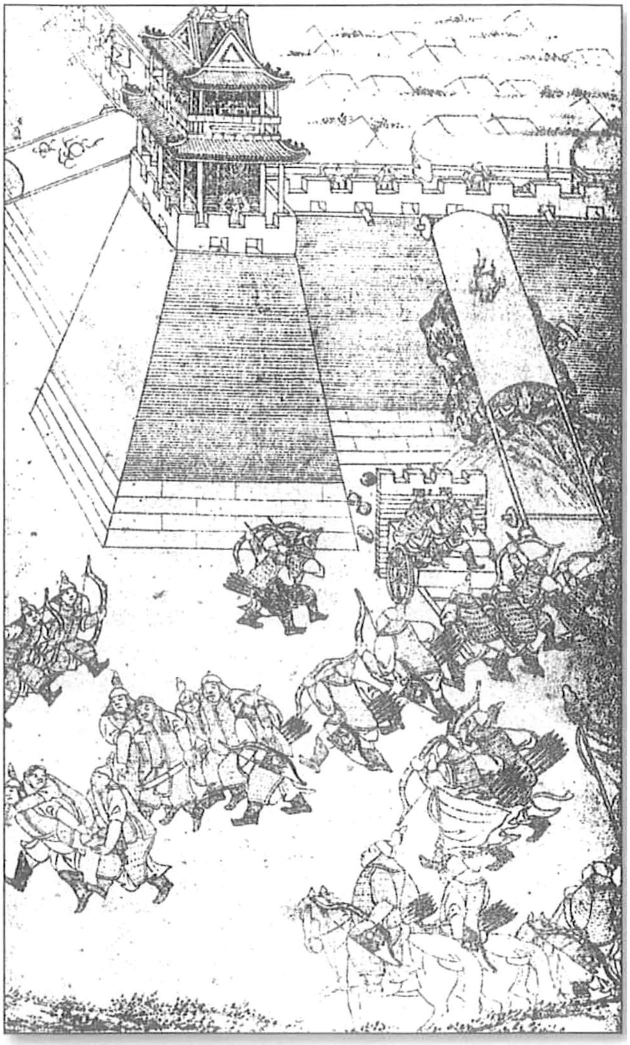
[50] Spence, *Emperor of China*, pp.20–21. See also the section on the campaign against Galdan and the Battle of Jaghun Modu, below.

[51] Heath, *Armies of the Nineteenth Century: Asia 2*, p.31.

Siege Warfare

Siege warfare was highly developed, especially for defensive purposes. City walls were made of rammed earth, sometimes faced with stone, and were seldom breached by artillery fire. To storm them was dangerous. The walls were steep, and many were also moated.

Even before the conquest of China, the Manchus had been sufficiently skilled at siege warfare to take a number of fortified cities. Beginning from 1619, they successfully stormed several cities by using assault ladders. The men who brought forth the assault ladders were covered by others who carried thick mantlets for protection against musket fire. Other common siege techniques, such as digging holes through the walls, usually under the protection of mobile, protective roofs that were erected against the enemy wall, were also known and commonly employed. The Manchus frequently used large, wheeled mantlets, from behind of which two men could fire at the enemy while the cart was pushed forwards by two others. Any Ming soldiers who attempted to flee the city would only find themselves under attack by the Manchu cavalry waiting outside the city walls.[52] Nurgaci expected sieges to last 'one or two months', which suggests that he assumed that supplies and



Mobile, protective roof and wheeled mantlet used during the 1626 siege of Ningyuan. (*Taizu shilutu*)

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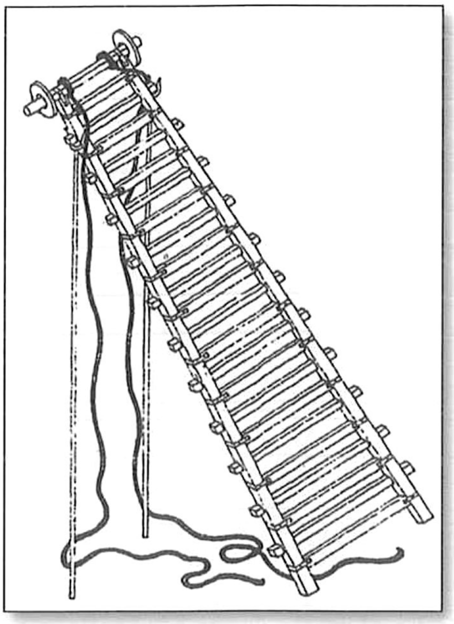
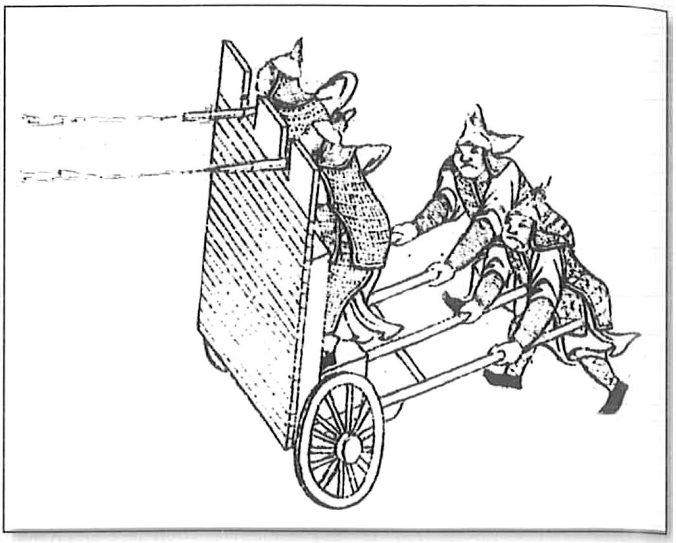
[52] Martini, *Bellum Tartaricum*, pp.258–59, cited in Di Cosmo, 'Did Guns Matter?', p.137. In the north under winter conditions, the Ming at least once (at the siege of Ningyuan) poured water on the walls as a defensive measure so that, when it froze, the ice reinforced the walls and made them far more difficult to scale. See, for example, Di Cosmo and Bao, *Manchu-Mongol Relations*, p.31. This was a common feature of northern warfare also characteristic of Russia and Scandinavia.



Assault ladder, the so-called 'cloud ladder'. (Anon.)



Wheeled mantlet. (*Taizu shilutu*)

sufficient pasture for horses could be found for a besieging army for that period of time but perhaps not for much longer.[53]

Tactical Signals

Signal cannon and fireworks were used to sound the alarm, especially within fortifications. A banner squadron would have one man trained to transmit signals with a conch shell.[54] Tactical signals were otherwise transmitted by drums, horns, gongs, and flag movements. Every unit carried various coloured flags and pennants, some of which were used for this purpose. The Qing armies in particular employed small, triangular red flags for signalling purposes. These were carried by specially selected men in front of the units, where they could be clearly seen. Most tactical movements could be controlled by means of such flags so that, under suitable circumstances, there was little need for shouted commands. When a unit fired their weapons, the flagmen would lay down on the ground in front of their unit so as not to be hit by friendly fire.[55]

When marching, the unit's pace of advance was regulated by the beating of the drum and the sound of the horn, whistle, tartar pipe, and gong.[56] This was supposedly the case also within militia units, although it is unlikely that many such units ever reached this level of training.

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[53] Di Cosmo, 'Military Aspects', p.353.

[54] Wade, 'Army of the Chinese Empire', p.280.

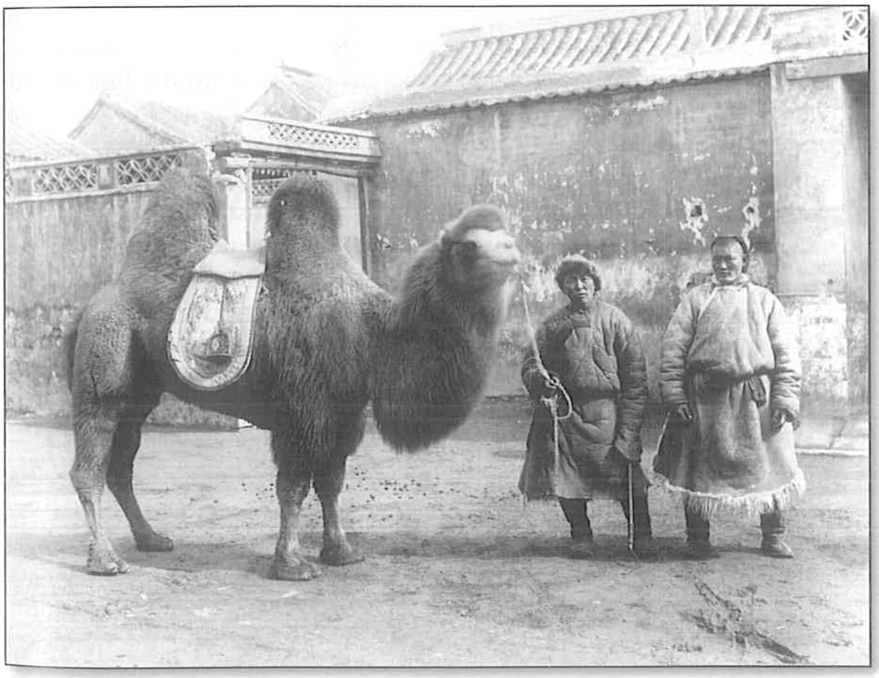
[55] Heath, *Armies of the Nineteenth Century: Asia 2*, p.32.

[56] See, for example, Martini, *Bellum Tartaricum*, cited in Struve, *Voices*, p.53.

Logistics and Discipline

When on campaigns and, for that matter, the semi-military hunting expeditions, at least the Kangxi emperor, and presumably others before and after him, would, whenever possible, have the Board of Revenue and the Board of Works (*Gongbu*) prepare a functioning logistics system to facilitate troop movements. This would include cold drinks such as iced water, herbal wines, or plum cider available by the roadside in hot weather and food and charcoal for hot meals in winter. Men were sent ahead to locate sources of water supply and ascertain the conditions of the grass for the horses. If springs had to be uncovered or wells dug, this work would, whenever possible, be executed well in advance of the arrival of the units so that the water would be clear. Logistics personnel would cover slippery or muddy roads with grass. They would give rewards to drafted support personnel such as guides, scouts, grooms, well-diggers, herders, and their dependents. The Kangxi emperor, according to his own testimony, even provided assistance and support for camp followers such as vendors and merchants, including food supplies and help in crossing cold rivers by allowing important merchants to double up with his guard officers on their horses while fording the river.[57]

In the north, the Manchus relied on camels as the chief means of logistics. The camels were joined in files of five or six animals, attended by one driver. The followers were attached to the lead camel's tail by a cord passing through the cartilage of the nose. The hind-most camel carried a bell to warn the driver of any break in the column. The average load of a camel was 400 catties



Two-humped Bactrian camel with handlers. Camels of this type were used both for riding, as in this case, and as pack animals. (Anon.)

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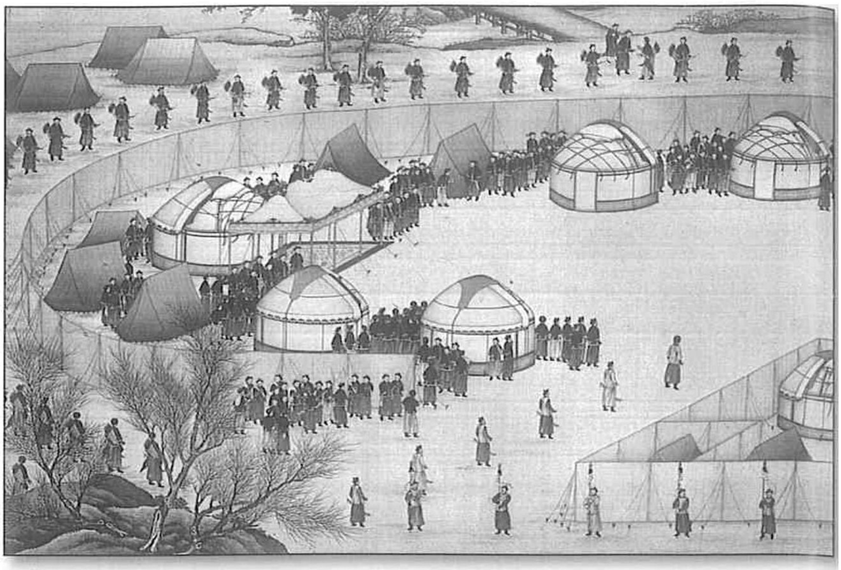
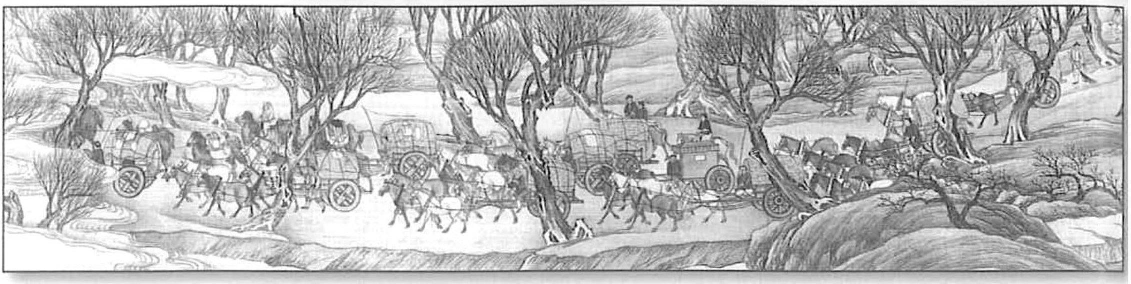
[57] Spence, *Emperor of China*, p.16; Di Cosmo (trans.), *Diary*, p.61.



The Qianlong emperor's camp during the annual autumn hunt. A line of bannermen stand guard around the yellow perimeter of bunting that shields the emperor's quarters from the rest of the camp. The imperial quarters consist of comfortable Mongolian *ger* (yurts), while most soldiers stay in tents. The annual autumn hunts were carried out under standard military operating procedures and constituted an opportunity to exercise the army under field conditions. (Anon.)



Imperial supply train during the 1751 inspection tour of southern China. (Xu Yang)

(about 240kg; a catty or *jin* equals 0.6kg). Its speed was about five kilometres per hour. The length of a file of five camels was just below 30m. Within China, heavy carts drawn by mules or oxen were used instead of camels, at a speed of about 25km per day over good roads, or oxen were used as pack animals. Where there were rivers or canals, the Manchus naturally made full use of boats for logistical purposes. Where neither camels, carts, nor boats were available, coolies carried supplies hanging suspended from a bamboo pole between them.[58]

In Tibet, fewer animals were available for transportation than elsewhere. At the time of the Qing expedition into Tibet in 1728, it was first decided that every two soldiers would share three horses. However, because of the poor road conditions, the Qing General Huang Tinggui, who handled logistics as the expedition was being planned, realised the impracticality of this plan. Instead, he ordered that each soldier would be given one pack horse. The soldiers were also given silver to buy or hire horses as needed along the way. It seems that the quotas worked out by Huang Tinggui, or at least very similar quotas, remained in force until 1857, when the transportation allowance of the soldiers was increased. A Green Standards colonel had hitherto been assigned seven horses and eight pack yaks. In 1857, however, this quota was raised to 10 horses, 12 yaks, and four porters. The original quota for a Green Standards lieutenant colonel had been five horses and six pack yaks; this was then raised to seven horses, nine pack yaks, and four porters. The allowance for a Green Standards major, which hitherto had also been five horses and six pack yaks, was increased to seven horses, eight pack yaks, and two porters. For a Green Standards captain, the original quota of three horses and four pack yaks was raised to four horses and six pack yaks. A Green Standards first lieutenant's original quota of two horses and three pack yaks was likewise increased, to three horses and four pack yaks. A Green Standards second lieutenant, who had had an original quota of two horses and two pack yaks, henceforth was also allowed three horses but still only two pack yaks. An ordinary soldier would henceforth be allowed one horse and one pack yak.[59]

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[58] Cromie, 'Military Forces', p.306; Lamprey, 'Economy', p.423.

Yet more horses and pack yaks were provided to the officers for the long and arduous journeys into and out of Tibet. A Green Standards colonel might then be given 14 horses, 22 pack yaks, and four porters. A Green Standards lieutenant colonel might receive nine horses, 14 pack yaks, and four porters, while a Green Standards major was allowed eight horses, 10 pack yaks, and three porters. A Green Standards captain's quota was five horses and six pack yaks. A Green Standards first lieutenant might be provided with four horses and five pack yaks, while a Green Standards second lieutenant's quota was three horses and four pack yaks. An ordinary soldier received one horse and one pack yak only, as he would while on duty in Tibet.[60]

Qing armies attempted to maintain a strict march discipline, but how successful they were remains unclear. The Kangxi emperor indicated that he would have to take measures to protect civilians in the area of operations so that soldiers did not trample the wheat fields or steal grain to feed their horses. He also ordered his men to sleep in camp, not in commandeered local temples or other empty buildings (an apparently common although clearly unauthorised action; even European reports from the 1640s mention Manchu soldiers moving themselves and their horses into temples, in effect turning them into stables), and to remain in line without wandering around.[61] Drinking or shouting was not permitted while on the march. For obvious reasons, looting and the assaulting of civilians, whether male or female, was not permitted.[62] Manchu regulations were always very strict with regard to looting and mistreatment or killing of civilians – even though both looting and killings, although often by former Ming soldiers who had changed sides, took place on numerous occasions during the conquest of China.[63] A general order from Hung Taiji dated 1632, while fighting in Mongolia, and read aloud to all soldiers makes this abundantly clear:

> By decree of the Khan. In the areas under military occupation, kill whoever resists or flees; do not kill those who do not resist. Do not separate husbands and wives;

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[59] Chen, *Qing Court's Troop Deployment*.

[60] Chen, *Qing Court's Troop Deployment*.

[61] Palafox y Mendoza, *History*, p.211.

[62] Spence, *Emperor of China*, p.17.

[63] See, for example, Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.86, 88–89.

> do not have intercourse with women before the prisoners have been distributed. If you separate husbands and wives, or rape women, these are capital crimes. If you kill people who do not resist, or remove and take the clothes they wear, your portion of the booty will be reduced and this part given to the plaintiff, and you will be beaten according to the crime. You can only kill a pig or a chicken, but cannot kill a sheep, or goat or larger animal. If you do, an equivalent amount will be deducted from your allocated booty and given to the plaintiff, and you will be beaten according to the crime. Do not destroy temples. Do not loot any of the paraphernalia placed in the temple to perform rituals. If you disobey, this is a capital crime. Do not take prisoner the monks who live in the temple and do not take anything that belongs to them. Make a record of the number of monks in the temple and report it. If there are people or livestock who have fled inside the temple, take them. Do not set up camp inside the temple's premises.[64]

A general order from an expedition specifically against Ming China, dated 1629, follows the same pattern but insists even stronger on the prohibition against looting and unwarranted destruction of property:

> Kill anyone fighting you. Do not seize any animal larger than a pig or chicken from the people who surrender. Of the people taken as booty, do not separate father and son or husband and wife, do not rape women; do not take their clothes and wear them; do not ruin houses and temples; do not damage any arm or weapon; do not chop down fruit trees. Those who, disregarding these words, kill surrendered people, or rape women, will be killed. Those who ruin houses and buildings, chop down fruit trees, take their clothes, or, splitting from their unit, rake up a village, will be beaten to death. Do not eat or drink immoderately the food and alcoholic beverages of the Chinese.[65]

In these early campaigns, before the conquest of China, the Manchus usually aimed to capture people and bring them back to their native region as workers. The general orders make it clear that this would happen, and one important aspect of the order was to safeguard the interests of the army as a whole. Captured families were to be assigned as units, without separation of husband and wife or children and parents. Captured animals would be distributed as part of the spoils. The distribution of loot favoured those who had been wounded in action, which may well have encouraged the men to fight hard.[66] The rules against killing non-combatants and the looting of temples also aimed to persuade the civilian population not to resist. Rules with such aims were issued increasingly often during the conquest of China.

Because looting was usually widespread, the measures taken to enforce discipline were harsh and inflicted on the basis of collective responsibility. An example from the suppression of the Three Feudatories in 1681 shows how the system worked. In this particular case, two servants found a dead cow from which they stole a chunk of beef. They were found out and apprehended by the soldiers of their general's guard, who apparently acted as military police. Not only the servants involved but indeed also all officers of their division were summoned, criticised, and punished. The division commander was fined three-months' salary, the regimental commander and vice commander were fined six-months' salary, the warrant officer in charge of the men was sentenced to 70 cane strokes, the soldier who was master of the servants, 80 strokes, and the servants themselves, 100 strokes.[67]

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[64] Di Cosmo, 'Military Aspects', p.346. The translation here is a slightly simplified version of the one provided by Di Cosmo.

[65] Di Cosmo, 'Military Aspects', p.346. The translation here is again a slightly simplified version of the one provided by Di Cosmo.

[66] Di Cosmo, 'Military Aspects', p.356.

The provision of fodder and pastures for the horses frequently caused difficulties. In the steppe campaigns, the Qing had to keep an eye on when the grass was sufficiently high to enable pasture and where pasture was available for enemy forces, which would affect their strategy and thus the Qing ability to defeat the enemy.[68] The sixteenth-century Ming General Qi Jiguang noted that the Mongols fattened their horses on the spring and summer grass and invaded in the summer or autumn, which enabled them to ride 80km or more in one day.[69] The Manchus would surely have been just as well informed on the condition of the grass.

Fuel was often a problem during campaigns because, in many parts of the territory controlled by the Qing, it was very difficult to obtain due to a lack of timber. Wood was cut up into billets and issued to the soldiers together with their food as a portable form of fuel rations. If no fuel was available, Qing soldiers, at least late in the period, were not averse to stealing it from civilians and even pulled down their houses to get at the rafters and beams. Most soldiers kept their fuel rations in their tents for security.[70]

The Kangxi emperor insisted on several rules for how soldiers on campaign were expected to behave. To maintain march discipline and to make sure that stragglers, brawlers, deserters, drinkers, and thieves among the men would be instantly punished, each soldier had to write his name on the shaft of each of his war arrows and on his helmet and suit of armour. Every horse was branded, and a wooden tag with information on which banner it belonged to and the name of the squadron commander was affixed to each horse's tail. Special detachments had the task of rounding up stray animals and, after identifying them, returning them to their owners. Any sick or exhausted animals were to be left in local villages or in Mongol camps to recover and not to be abandoned.[71]

Minor offences were punished by flogging with a bamboo, the number of blows varying from 50 to 200 according to the gravity of the offence. Major offences were punished by beheading, usually in front of the entire unit and without the need for a court martial.[72] Bannermen guilty of offences were usually punished more severely than Green Standards soldiers. The various regulations were, in 1731, codified in an ordinance of 40 regulations. According to this ordinance, the maximum number of blows was set at 100. Additional regulations were added in 1748 and 1784.[73]

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[67] Di Cosmo, 'Elephants', p.9; Di Cosmo (trans.), *Diary*, p.48.

[68] Di Cosmo, 'Military Aspects', p.356.

[69] Chase, *Firearms*, p.165.

[70] Lamprey, 'Economy', p.416.

[71] Spence, *Emperor of China*, pp.19–20.

[72] Lamprey, 'Economy', pp.420–22.

Also issued were campaign orders that all tents were to be pitched in neat rows and at a certain distance from each other. Soldiers on sentry duty or in a state of alert were ordered to keep their horses saddled and ready. At all times, they should have boots on, bow strung, armour fastened, and the water bottle full. At night, they were not allowed to use tents or fires. If they failed to report an enemy approach, or if they made a false report, they were to be executed in front of the army.[74]

It was not allowed to sell any enemy weapons captured or found after a battle or to let them fall into the hands of roving Mongols.[75]

Although logistics were well understood and taken care of, Qing armies usually did not include any facilities or dedicated personnel for medical care. While officers were expected to learn medicine, and some soldiers probably doubled as medics, there were no field hospitals. Wounded men were evacuated in whatever way was possible, each often being carried by two others in improvised litters, such as in a large basket suspended from a bamboo by a rope or on a door suspended in a similar manner. However, this was often of little assistance as long as no treatment was available. When a soldier fell ill or was wounded, he would be dismissed and allowed to go home, seek treatment from whatever surgeon or physician he might find and could afford, and to get well, or die, as it may be.[76] Soldiers with good service records who survived or otherwise wished to retire for reasons of infirmity might be allowed certain pensions. In some cases, a soldier's son would be allowed to enter the ranks in his place to support him.[77]

Unlike when serving closer to home, a soldier, regardless of rank, who died in Tibet was, at least from 1857, entitled to have his corpse carried back to his family for funeral services. There were fixed quotas for the number of horses and pack yaks that were provided for this purpose. An officer of the rank of major or above in the Green Standards was allowed two pack horses for carrying the corpse as well as four porters. In addition, his escort was permitted five horses and 10 pack yaks. Green Standards captains, first lieutenants, and second lieutenants would be provided with a pack horse to carry the corpse and two porters, in addition to two horses and two pack yaks for the escort. Lower-ranking officers and ordinary soldiers were permitted only one horse to carry the corpse.[78]

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[73] For details, see Wade, 'Army of the Chinese Empire', pp.400–02.

[74] Spence, *Emperor of China*, p.19.

[75] Spence, *Emperor of China*, p.20.

[76] Lamprey, 'Economy', pp.418–19.

[77] Wade, 'Army of the Chinese Empire', p.398.

[78] Chen, *Qing Court's Troop Deployment*.

Military Intelligence and Psychological Warfare

The Qing were well aware of the need for proper intelligence in preparation of and during military campaigns. They consistently made diligent use of scouts and spies for reconnaissance purposes, as was by then traditional in nomad (and indeed any other) warfare. In the campaign against the Oirat leader Galdan in 1696, for instance, Qing scouts watched for the smoke of the Oirat army's campfires and, based on the evidence of hoofprints and horse dung, assessed the enemy's movements.[79] But the Qing also knew the value of the interrogation of prisoners of war. In 1631, at the siege of Dalinghe, Hung Taiji learnt that the defenders had been on their own for more than a month and supplies were running out from the interrogation of several captured enemy soldiers. Hung Taiji even specifically ordered his men to capture officers, not only privates or menials, because the latter seldom had any reliable information.[80]

The Qing realised the value of captured documents as well. By 1645, during the conquest of Ming China, the Manchu Regent, Prince Dorgon, on several occasions received captured Ming military reports from his scouts. Dorgon once even told his ministers how amused he was to see that the Ming officers were always claiming false victories. 'It was really very comical', he remarked.[81]

The Qing, as noted, often employed Imperial Bodyguards and members of the other guards units for intelligence purposes. Judging from the various Qing sources, the Manchus, in fact, seem to have spent considerable efforts on intelligence gathering. In addition to those already mentioned, the Kangxi emperor claimed to use captured pirates (such as the followers of Coxinga) as advisors on how to defeat their former comrades. He also despatched such men on missions to make contact with their former comrades to bring letters to induce them to join the Qing. The Kangxi emperor even claimed to send agents to travel on merchant ships for the purpose of tracing the routes used by pirates. He also, in what today would be referred to as a 'special forces operation', disguised soldiers as merchants and sent them out as decoys to catch the pirates; this effort backfired, however, as the disguised soldiers instead began to attack genuine merchants, claiming that these were pirates.[82]

Furthermore, the Manchus were no strangers to the use of stratagems. On the night of 1 June 1645, the Manchu Prince Dodo created a diversion by floating unmanned rafts carrying burning torches across the Yangtze River to give the defending Ming troops a target to waste their ammunition on while the Manchu army crossed safely upriver of the Ming defences.[83] As late as in the early nineteenth century, the Qing would pitch empty tents in a camp or even erect masses of earth in the form of tents, whitewashed on top, to deceive the enemy into thinking that a Qing army was stronger than it was.[84]

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[79] Spence, *Emperor of China*, p.20.

[80] Wakeman, *Great Enterprise*, vols 1–2, p.175.

[81] Wakeman, *Great Enterprise*, vols 1–2, p.154 n.209.

[82] Spence, *Emperor of China*, p.48.

[83] See, for example, Wakeman, *Great Enterprise*, vols 1–2, p.570; Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, p.86.

The Manchus frequently used propaganda and what today would be termed 'psychological warfare operations'. On 21 April 1644, the Manchu emperor issued an open letter to the Ming generals in northern China, inviting them to join the Qing forces. Not only would such means persuade a few to defect, but the others would also find it increasingly hard to know whom of their fellow officers to trust. Similar efforts were made several times during the history of the Qing empire, in particular during the invasion of China and the war against the Three Feudatories, during which former subordinates of Wu Sangui were sent ahead of the Qing armies with copies of the pacification edict, offering amnesty and payments to those who surrendered or provided information. Provisions were even made for those generals who dared not join the Qing openly because their families were held hostage, as long as they declared their loyalty in secret and then worked for the Qing within the enemy's base area.[85] In particular during and in the immediate aftermath of the conquest of China, the Qing also took great efforts to publicise the order that Manchu soldiers were not permitted to rob or kill Chinese civilians and that those who did were convicted and executed.[86]

Communications and Couriers

The Manchus knew the value of reliable communications. By the early eighteenth century, the Qing had organised a highly efficient governmental postal system within the empire. This system, which consisted of a wide network of over 2,000 military postal stations (*juntai*) that linked key cities and transportation routes, dealt exclusively with official communications. The postal stations were supported locally from the land tax revenue. The stations consisted of inns with attached stables that supplied the necessary mounts for the couriers, who carried tallies that allowed them to claim horses and supplies. The postal system naturally relied on fast horses in the north, but there were also mules and donkeys for use in rugged terrain and camels for the deserts and arid lands of the far west. In the south-east, however, the postal system instead relied on boats that were used on the many canals and rivers of the region. Road conditions varied both according to the seasons and throughout the period, not to mention mode of transportation, so only a few examples of communications speed can be offered. An urgent message could, for instance, be sent from Peking to Xi'an, a distance of some 1,200km, in six or seven days. The journey from Peking to Nanking, a distance of about 1,300km, would take no longer than 10 days if urgent or 13 days under normal circumstances. An urgent despatch from Peking to Hangzhou in Zhejiang province, also some 1,300km, took around 10 days as well. An urgent journey from Peking to Changsha in Hunan province, a distance of roughly 1,400km, needed two weeks or a little more. In times of war, an urgent message could be sent from Peking to Ili in Sinkiang, a distance of no less than 3,500km, in a little more than 20 days. Urgent despatches from Peking to Canton, a distance of more than 2,000km, could be forwarded in about 16 days. Under normal conditions, however, communications took considerably longer, often twice as long.[87] Travel to Tibet took much longer because of the difficult terrain and poor road conditions. By the late nineteenth century, couriers were expected to cover the distance between Lhasa and Peking in 72 days, although, on occasions of great urgency, express couriers could do it in 36 days or even faster.[88]

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[84] Heath, *Armies of the Nineteenth Century: Asia 2*, p.35, citing Ouchterlony, *Chinese War*.

[85] See, for example, Wakeman, *Great Enterprise*, vols 1–2, pp.184, 417 n.9, 486, 493, 696–97, 715; Spence, *Emperor of China*, pp.35–36.

[86] See, for example, Adam Yuen-chung Lui, *Two Rulers in One Reign: Dorgon and Shun-chih, 1644-1660* (Canberra: Australian National University Faculty of Asian Studies Monographs, 1989), p.13.

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[87] Feuerwerker, *State and Society*, p.62; Jonathan D. Spence, *Treason by the Book* (London: Penguin, 2002), pp.16–17, 38; Joanna Waley-Cohen, *Exile in Mid-Qing China: Banishment to Xinjiang, 1758-1820* (New Haven, CT: Yale University Press, 1991), p.148 n.44.

[88] Das, *Journey to Lhasa*, pp.185–86.

8

Battles and Campaigns

To illustrate the Qing army in action, this chapter will describe three sample campaigns and battles: the conventional campaign and siege of Dalinghe in 1631, the riverine campaigns that led up to the sieges of Albazin in 1685–1686, and the steppe campaign that led up to the Battle of Jaghun Modu in 1696. The first shows the Qing army during a siege and in a number of set-piece engagements on broken ground; the second demonstrates the Qing approach to northern intruders in a campaign that relied heavily on riverine operations in forested terrain; and the third illustrates how the Qing conducted a fluid cavalry campaign on the barren steppes of Inner Asia.

Siege of Dalinghe, 1 September–20 November 1631: Manchus versus Ming Chinese

By the autumn of 1631, a key target for Hung Taiji's expeditionary army was the major Ming garrison town and trading centre of Dalinghe. The town, protected by thick walls, was well defended and boasted a population of some 16,000 inhabitants, in addition to a substantial garrison that, at the time, stood at 14,000 experienced men, half infantry, half cavalry, commanded by General Zu Dashou (d. 1656), who happened to be there with his army for an inspection tour of the frontier.[1]

Moreover, the city was protected by its location. It could only be reached through narrow passes that were defended by a series of over 100 forts or 'towers' (*tai*). Each fort, with populations of from about 70 to over 600 people, could be sealed shut with a heavy gate and was well stocked with supplies. The city itself, however, had only enough food for, at most, one month.

In the early morning of 1 September 1631, Hung Taiji's army of two divisions (20,000 soldiers according to the conventional but not necessarily correct interpretation; he probably had fewer men at his disposal) arrived outside Dalinghe. His Manchu forces included the Imperial Guard, mounted like most Manchu units and presumably around 500 men strong, although exact numbers are unknown. Hung Taiji also had regular Manchu cavalry and some Manchu infantry. In addition, Hung Taiji had Mongols from two banners under Unege and Obondoi and Chinese-martial troops, two units referred to as '*Jiu Han bing*' (Old Chinese soldiers) commanded by colonels under the overall command of Tong Yangxing (d. 1632), who had gone over to Nurgaci after the taking of Fushun in 1618. The Chinese-martial force had 60 large, modern cannon – six of the 'red barbarian' (*hongyi*) and 54 of the 'great general' (*dajiangjun*) type – as its main armament and, as far as can be ascertained, even more jingals. The sources at least mention far more guns in the artillery complement than the number of cannon, which, together with the Manchu recruitment instruction for Chinese-martial, would seem to indicate that the force also included a hefty number of jingals.[2]

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[1] This section is based on Wakeman, *Great Enterprise*, vols 1–2, pp.170–96. Wakeman based his interpretation of events mainly on the Manchu chronicle *Da Qing Taizong Wen huangdi shilu*.

A local Chinese was captured and interrogated, and Hung Taiji learnt, to his dismay, that General Zu and his substantial army had arrived in the city. He also learnt that the city walls were newly repaired, a fact that he ascertained in person during the night.

Hung Taiji accordingly ordered his Manchu troops to take up positions around the city. He stationed his Chinese-martial units on the highway between Dalinghe and Quanzhou. Hung Taiji also ordered the construction of a palisade and a moat 1.8m wide and 2.5m deep around the city to contain it. (These defences were gradually improved upon as the siege continued.) He set up his personal headquarters on a mountain summit south of the city.

Hung Taiji sent a letter to General Zu inviting him to join the Manchus, but the general did not comply. During the first few days of the siege, the Ming soldiers on several occasions sallied forth, which resulted in skirmishes with Hung Taiji's cavalry. Although the latter generally won, Hung Taiji realised that he had to take the forts surrounding the city before he could conquer the city itself. He had some of his Chinese officers approach the forts with offers to change sides. At least some of the outer forts south and west of the city had, by 5 September, surrendered to avoid being attacked. The following day (6 September), Hung Taiji also, in what today would be referred to as a 'psychological warfare operation', had an arrow shot over the city wall with a letter addressed to the Mongol contingent in Ming service within the city. Hung Taiji offered them protection and patronage if they surrendered, pointing out that Manchus and Mongols really belonged to the same country.

On 7 September, Hung Taiji's artillery began to bombard the city walls of Dalinghe as well as several forts east and north of the city. By 10 September, four key forts had fallen to Manchu bombardment and assault. The effectiveness of the artillery against these small forts is clear from the Manchu records:

> Our Chinese soldiers (*nikan cooha*) opened cannon fire against the tower (*tai*). The tower was entirely destroyed, and the six men on top of the tower died. Then

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[2] See, for example, Di Cosmo, 'Did Guns Matter?', p.148, which includes translated excerpts from the sources.

> the remaining Chinese abandoned the tower, and, forced to flee in the night, they were all killed. One of them who was captured alive said that once the people in the tower were hit with the red *canjiang* ('brigadier') cannon, they were done for . . .
>
> After they proceeded to assault the towers, they encircled them and fired the cannons. The over 100 guns that had surrounded the tower were all fired ... On the night of the seventeenth, 60 Chinese soldiers from within the tower made a resolute and powerful foray, but Quartermaster Lioha defeated them, killing nine men and capturing one alive. Under interrogation, this man reported that when we fired the cannons, the shots altogether hit approximately 30 people.[3]

However, Hung Taiji then received the news that Ming reinforcements were on their way from Songshan. The Ming reinforcements arrived in two relief columns: one from Songshan and another from Jinzhou. The first, which only consisted of 2,000 men, was defeated on 11 September by a mere 300 Manchu bannermen – suggesting that an ambush or at least a surprise attack took place. A surprise attack was definitely the tactics used by the Manchu troops when the second Ming contingent arrived a few days later. This was a substantial army of reportedly some 6,000 men. Hung Taiji had detached a cavalry force of 500 Manchu bannermen and 500 Mongols under Prince Ajige (1605–1661), his half-brother, to deal with the Ming. Ajige's force was nearly surprised itself, as the Ming units moved in and began to set camp under the cover of fog and mist without being detected. Then, however, the mist cleared away temporarily, just long enough for the Manchu soldiers to locate the enemy and then take advantage of the mist for their own deployment. Ajige's men slipped behind the Ming units and routed them in a decisive attack from the rear. As the Ming fled back to Jinzhou, Ajige pursued for some distance, picking off enemy stragglers. They captured 15 battle standards (the Ming used standards in at least as large numbers as the Manchus), 219 armoured soldiers, 206 horses, and a Ming major.

In another psychological warfare operation, Hung Taiji had the captured officer brought under the city walls of Dalinghe to inform the defenders that the relief column had been destroyed.

General Zu responded on or soon after 25 September by sending out a column in an attempt to recover the forts south and west of the city that had surrendered to the Manchus earlier. The attempt failed, but Hung Taiji, who was away at the time for a ceremony in honour of Ajige's victory, realised that the sheer number of Ming soldiers posed a very significant threat, in case they made a major sortie. Hung Taiji's commanders therefore made several contingency plans on defensive measures, including a plan for a retreat in case the Ming army proved too strong to resist.

Meanwhile, another and larger Ming relief column was on its way. This was a huge army of reportedly 40,000 soldiers under the command of General Wu Xiang, General Zu's brother-in-law, who marched from the Shanhai Pass (Shanhaiguan) at the extreme north-eastern end of the Great Wall to Jinzhou. The first units of this relief army, 7,000 men in total, had set up camp in front of Jinzhou, just on the other side of the Xiaoling River.[4] This news reached the Manchu army on 7 October, although Hung Taiji's men did not yet know any details of the Ming relief force nor who was in command of it.

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[3] Di Cosmo, 'Did Guns Matter?', pp.148–49. The translations provided by Di Cosmo have been slightly amended as to style.

Hung Taiji responded by immediately despatching half his Imperial Guard to meet the enemy and to stem his advance. Four days later, on or about 11 October, he personally led another contingent, including 500 Old Chinese soldiers under Tong Yangxing, towards Jinzhou. Upon finding his Imperial Guard, which had not yet been engaged by the enemy, Hung Taiji merged his two contingents. He then continued towards Jinzhou in person, together with his half-brother Dodo and only 200 handpicked imperial guardsmen. Taking advantage of the hills to avoid being seen by the enemy, Hung Taiji and his men rode up to the river at a point opposite the camp of the relief column. The Manchu cavalry put on their battle armour, after which Hung Taiji personally led his 200 men in a charge across the river (which clearly cannot have been very deep) and into the Ming camp. The Ming soldiers, surprised by the sudden charge, panicked and ran for the safety of the city walls of Jinzhou, with the Manchus in hot pursuit.

A few hours later, the Manchu force that Hung Taiji left behind also fought a battle with what is reported to have been the main body of Ming soldiers. Again, Hung Taiji's men were victorious, among others capturing a Ming colonel. Later in the day, the Manchu force returned to Dalinghe.

In Dalinghe, the defenders had now been on their own for more than a month, and supplies were running out. Hung Taiji knew this because the Manchus had interrogated several captured enemy soldiers. Hung Taiji specifically ordered his men to capture officers, not only privates or menials, because the latter seldom had any reliable information.

On 13 October, Hung Taiji again sent a letter to General Zu, inviting him to change sides. He did not neglect to mention that he knew of the difficult conditions inside the besieged city due to the lack of supplies and promised the general great wealth and honour in exchange for surrendering the city. As before, Zu did not respond. Hung Taiji therefore decided to try to lure General Zu's men out of the city. Since he had already attempted one major sortie, perhaps he would make another if conditions seemed right?

On 14 October, Hung Taiji secretly sent some porters and artillerymen towards Jinzhou. Their task was to move about five kilometres towards Jinzhou, then fire off several cannon and return towards Dalinghe, raising dust in the process as if they were a major relief force. At this point, Hung Taiji pretended to withdraw from the camp with his Imperial Guard towards the hills.

General Zu, taking the bait, immediately sent out his own units in another attempt to recover the forts to the south and west of the city. The Ming soldiers had just raised their scaling ladders in their attempt to storm one of the forts when Hung Taiji's Imperial Guard rode down on them, wounding hundreds and killing several of the Ming troops.

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[4] Manchu sources tend to be unreliable with respect of the number of enemy soldiers. Whether General Wu really commanded 40,000 men is debatable. Yet the ensuing events suggest that the Ming army clearly outnumbered Hung Taiji's men.

While General Zu had suffered only minor losses, this was his last attempt to make a sortie. Henceforth, no Ming soldiers would sally forth towards Hung Taiji's soldiers.

So far, the Manchus had been successful through their efficient use of speed, concealment, and surprise, not to mention the audacity of Hung Taiji and other Manchu commanders. There had not yet been any major set-piece battle between Hung Taiji's men and the Ming troops.

On 19 October, the Ming relief army of 40,000 regular infantry and cavalry crossed the Xiaoling River in the direction of Dalinghe. The survivors of the 7,000 men of the advance guard had then presumably rejoined the main army. The Ming army, commanded by Zhang Chun, moved slowly and cautiously. Having crossed the river, the Ming soldiers set camp and threw up ramparts behind which they positioned cannon.

As Manchu scouts reported the Ming positions to Hung Taiji, he left half his force at Dalinghe and took the rest with him to block the Ming advance. However, he seems not to have realised the sheer size of the enemy army. Having seen its camp and lines of defence, Hung Taiji returned to his main camp at Dalinghe. According to the set of Manchu reports known as the '*Manwen Laodang*', he noted, 'The Ming army's camp is strong, I will attack when they move forwards'.

Zhang Chun waited three days before moving on. At 1:00 a.m. on 22 October, he led the Ming army out of its camp and onto the road towards Dalinghe. Because of the darkness and late hour, Hung Taiji's scouts did not report the arrival of the Ming army until it was five kilometres from the city. Hung Taiji rapidly moved out his own 15,000–20,000 men to confront the Ming army.

Zhang Chun had used the time before the Manchu army arrived to deploy his 40,000 men into a defensive block protected on all four sides by cannon and muskets (*niaoqiang*). It was clear that he expected the Manchu cavalry to attack and that he assumed that he would be able to repulse any such cavalry attacks through his use of superior firepower. We do not know exactly how Zhang Chun deployed his forces. Probably, his men prepared field defences. Zhang Chun may also have positioned his guns as an outer defence line in front of his infantry, as the Ming previously had done on several occasions.[5] If so, the Manchus knew that they had successfully penetrated such defences in the past, for instance, at the Battle of Mt Sarhū in 1619 and during the siege of Liaoyang in 1621. On those occasions, the Ming gunners were first overwhelmed by Manchu archery, then they were broken by a decisive Manchu cavalry charge. The rate of fire of the Ming guns had simply been too low to prevent the Manchus from storming such outer defences, something that Hung Taiji would know, although it is quite possible that Zhang Chun still believed that this old Ming gunnery doctrine remained a valid defensive tactic.

Be that as it may, Hung Taiji decided to attack. He did not aim for a surprise attack since surprise was impossible. Instead, he ordered the Manchu and

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[5] For instance, during the siege of Liaoyang, which is apparent from an illustration in *Manzhou shilutu*. See also Di Cosmo, 'Did Guns Matter?', pp.137–38.

Mongol cavalry to approach behind infantry that pushed wheeled mantlets ahead of them in an attempt to provide some protection from Ming musket fire. Hung Taiji probably did not expect his smaller army to be able to break the Ming in a set-piece battle, so he instead decided to try to break Ming morale by eliminating its commander. Hung Taiji divided his army into two wings, both of which were spearheaded by a line of wheeled mantlets. As soon as they came into range, the left wing would charge the main line of the enemy, while the right wing was ordered to aim straight for Zhang Chun's headquarters. Hung Taiji also ordered Tong Yangxing to deploy his Chinese-martial units on high ground to the east of the enemy, from where they could fire down at the enemy with artillery and fire arrows. Considering the vast difference in size of his small contingent of gunners as compared to the Ming forces, it is unlikely that Hung Taiji expected them to be more than a nuisance to the Ming.

The left wing's charge was repulsed by cannon and musket fire, suffering serious losses without even reaching the Ming lines. It indeed remains open to question whether the charge had been a serious attempt or a mere feint in support of the right wing's more important task, but our sources are silent on this point. Meanwhile, however, the right wing, despite suffering casualties from musket fire, managed to break through the Ming lines and ride down Zhang Chun's staff. The survivors of the Manchu left wing then followed through the gap created by the right wing's charge. Both wings regrouped in an area beyond Zhang Chun's headquarters. But the Ming lines also reformed, still undefeated.

Meanwhile, Tong Yangxing was harassing the Ming with his artillery and fire arrows. The Ming, realising that the autumn grass was dry and that the wind was at their backs, responded by setting fire to the dry grass. This might have been disastrous for Tong's men, but then the wind suddenly picked up and swung around nearly to the opposite direction. The fire and smoke thus blew back upon the Ming lines.

At this moment, Hung Taiji, who until then might well have been on the verge of cutting his losses and withdrawing from the much larger Ming army that he clearly had not been able to defeat, took advantage of the situation by launching a second frontal assault, with both Manchu and Mongol cavalry and Manchu infantry. Despite suffering further losses from the Ming artillery and muskets, they broke through the Ming lines, which then collapsed. The Ming soldiers panicked and fled, while Hung Taiji's cavalry rode down the Ming infantry and pursued the Ming cavalry, killing and capturing many. The Manchus captured 34 Ming officers including Zhang Chun himself, who, after some hesitation, was persuaded to join the Manchus, as did the rest. The number of dead or captured other ranks are unknown but must have been substantial. According to the *Manwen Laodang*, Hung Taiji noted that the Manchus had killed more Ming soldiers in this battle than ever before. The Manchus also captured substantial numbers of firearms and artillery as well as large amounts of much needed supplies. (The captured firearms and artillery, as well as the captured people, were sent back to Shenyang on 9 November with a supply column that had arrived earlier in support of Hung Taiji's army.)

After the battle, the Manchu army returned to Dalinghe. On 31 October, Hung Taiji had 23 of the Ming officers whom he had captured and who had since joined the Manchus write letters to the besieged garrison, imploring its commanders to surrender. General Zu received the letters but declared that he would never surrender. He even gave the Manchu emissary some food to partake in, perhaps in a futile attempt to show that the city was still fully supplied, which was very far from the truth.

Even so, Hung Taiji continued the attempts to persuade Zu and the other Ming commanders to surrender and join the Manchus. By then, the Manchu army, too, was running out of supplies. It had been at Dalinghe for two full months, and foraging could not support such a large army while stationary, especially not in this location because there were no agricultural villages in the vicinity. Supply columns came from Mukden, but they were insufficient to provide fully for the needs of the Manchu army. The supplies captured from the Ming relief force also did not last nearly long enough. And in the area around Dalinghe, all Chinese settlers had taken refuge in the forts, many of which remained closed to the Manchus, and brought their livestock with them.

Hung Taiji therefore ordered an attack on the largest of these forts, the walled settlement of Yuzizhang commanded by Ming Lieutenant Colonel Wang Jing. This was in effect a fortified village with over 600 inhabitants (men, women, and children) and what remained of the village's herd of livestock. The fort was built into a mountainside and defended by sturdy walls.

To reduce this substantial fort, Hung Taiji sent Tong Yangxing and his entire contingent, including the 60 cannon. In addition, 500 Manchu soldiers were ordered to support Tong in the siege.

Tong spent three days bombarding the fort into submission. After this, 57 people had been killed within the fort, and the remainder suffered from the severe impact of the bombardment. On 5 November, Wang Jing surrendered, seeing that his men would no longer defend themselves. Hung Taiji's men captured 240 males, 339 females, and 70 head of livestock.

The surrender of Yuzizhang was important, but more important was that, as the news spread, together, one may presume, with the news of the defeat of the relief army, the nearby forts also surrendered while the inhabitants of the more distant forts abandoned them and dispersed to save themselves. The sorely needed supplies recovered by the Manchus in the surrendered forts were sufficient to last Hung Taiji's army for another month. The only alternative would have been to transport supplies from Mukden over a long and difficult road. The Chinese-martial artillerymen had made themselves useful on several occasions during the siege, but they were clearly vital to the Manchu ability to supply the army by reducing the outer forts of Dalinghe.

Inside Dalinghe, however, conditions were truly desperate by then. On 3 November, a deserter had already surrendered to the Manchus, informing them that all but 30 of the 7,000 Ming cavalry horses had been slaughtered and eaten and that the Ming soldiers had embarked upon cannibalism to survive. The deserter could tell that first the workmen, then the townspeople, and now the sick and weak among the soldiers themselves were being killed for meat.[6]

On 7 November, Hung Taiji initiated new negotiations with General Zu, who now was almost ready to surrender. On 16 November, he also wrote a letter, shot across the city wall, to the rank-and-file within the besieged city, inviting them to kill their officers in revenge for their acts of cannibalism and surrender to the Manchus. The following day, another deserter managed to get out of the city. Upon surrendering, he reported that cannibalism had become widespread by now, with the officers slaughtering and eating their men, and that General Zu planned a sortie with his entire army on 18 or 19 November in an attempt to break out.

Hung Taiji did not believe that the Ming soldiers, in their current condition, would succeed in breaking out. General Zu clearly reached the same conclusion because, on 18 November, he had letters shot across the wall into the Manchu lines, inviting Hung Taiji's representatives for negotiations. The following day, talks on surrender began. These involved complex issues beyond the mere surrender of the garrison since Hung Taiji wished the Ming soldiers to join the Manchus and renounce their fealty to the Ming – such an action surely would cause grave consequences for the Ming officers whose families remained within reach of the Ming government. General Zu only wished to surrender if Hung Taiji would then immediately move to attack Jinzhou, where he kept his family and which he may have hoped to secure for himself. The Manchu army, however, would soon again be out of supplies, especially if the Manchus also had to provision the surrendered Ming soldiers, and was in no shape to undertake another major siege.

On 20 November, General Zu surrendered with the understanding that he would subsequently lead his remaining units in an attack on Jinzhou on behalf of the Manchus, and, on the morning of the following day, the formal ceremony of surrender took place. Of the 30,000 people in Dalinghe when the siege began, only 11,682 remained. It can be presumed that, of them, the majority consisted of General Zu's soldiers. Most civilians appear either to have starved to death or been butchered for meat. As for General Zu, on 23 November, he led 26 of his men to Jinzhou to turn this city over to the Manchus. Although General Zu remained in communications with Hung Taiji for some time, it soon became clear that the general either had failed in his mission or, most likely, never had had any intention to join the Manchus. Those of his sons and nephews whom he had left as hostages with Hung Taiji, however, remained with the Manchus, served with distinction, and, in several cases, achieved high rank in the Manchu army. So did most of the other Ming officers who had surrendered at Dalinghe. Henceforth, the war between Hung Taiji and the Ming was no longer a mere war between Manchus and Chinese, as the Manchu army would include many former Ming soldiers who would stay loyal to their new suzerain. As for General

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[6] This was maybe less unusual than one might wish to believe. Other incidents in which Ming troops fell back on cannibalism had occurred in 1622 (when Ming soldiers ate the meat of prisoners of war) and 1624. Key Ray Chong, *Cannibalism in China* (Wakefield, NH: Longwood Academic, 1990), p.76.

Zu, he eventually again surrendered to the Manchus, at Jinzhou on 8 April 1642. Hung Taiji pardoned him because of the loyal service provided by his relatives in the Qing army and in the hope that the general might be able to persuade yet another of his nephews, Wu Sangui, to join the Qing.[7] In this scheme, Hung Taiji was unsuccessful, even though Wu Sangui eventually did join the Qing for the final invasion of China.

Riverine Campaigns against Russian Incursions and the Sieges of Albazin, 1685–1686: Manchus versus Russians

We have seen that Russian fur traders and explorers in the seventeenth century ranged across Siberia and into the Amur valley north of Manchuria. The country was rich in sables, and the Russians frequently clashed with local tribes who regarded the Russians as poachers. Many Russians operated as river pirates. They primarily raided to get supplies, mainly grain, but they also wanted tribute. The movement east was spearheaded by cossacks. The cossacks in Siberia were a heterogeneous group of hunters, peasants, exiles, vagabonds, river pirates, and common adventurers from many countries, including mercenaries and former prisoners of war of Lithuanian, Polish, Ruthenian, Ukrainian, Swedish, German, and Danish extraction.

Russian explorers already began to reconnoitre the Amur River and conduct raids into the outer reaches of Manchuria in the early 1640s. The first explorer–raider of some prominence was Vasiliy Danilovich Poyarkov (1597–1668), a soldier who, in 1643, led an expedition authorised by the governor of Yakutsk in Russian Siberia. After several brutal clashes with local tribes, Poyarkov and his men, in early 1644, had to endure a winter siege during which they were reduced to eating human corpses. Yet they survived due to their muskets and cannon, which the local tribes lacked. No Qing soldiers participated in the siege. Afterwards, Poyarkov and his men penetrated to the Okhotsk coast, where they, in 1645, built a fortified wooden fort (*ostrog*) that later became Okhotsk.

The Qing at first responded by forcibly resettling some local tribes out of reach of the Russians. However, it was soon obvious that Manchu military force must be directed against the Russian incursions.

In 1650, a ruthless former peasant named Yerofey Pavlovich Khabarov (c. 1603–c. 1671) led a large-scale raid of cossacks supported by several small sledge-mounted cannon and a small unit of Russian regulars, apparently 21 soldiers, into the outer reaches of Manchuria. In 1651, Khabarov built a fort on the Amur called 'Achansk', where his force spent the winter. Reinforcements then increased Khabarov's party to over 200 men and three cannon. However, the savagely oppressed natives requested Manchu assistance, and a Qing army was despatched towards the Russian position.

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[7] Wakeman, *Great Enterprise*, vols 1–2, pp.221–24.

It consisted of about 600 regulars and 1,500 local tribal auxiliaries. The Manchus brought six cannon and 30 jingals. On 24 March 1652, the Qing army attacked Achansk and broke its walls with artillery fire, after which they launched an assault. Khabarov and his men managed to drive off the Qing with moderate losses.[8] The Qing had orders to take the Russians alive, which, for obvious reasons, precluded overly aggressive tactics. However, Khabarov realised that the Manchu artillery was superior to his own, and the few firearms the Manchus carried (called 'rapid-firing' matchlocks in one report) surpassed the Russian guns in firepower. Khabarov wisely chose to retreat, pursued by an army of reportedly 6,000 Manchu soldiers and natives who had rallied against the Russian invaders.[9]

The Qing maintained a small temporary garrison at Ningguta (in modern-day Jilin province), near the ancestral home of the Qing, but this was by no means strong enough to secure the frontier. In June 1654, Khabarov's successor Onufriy Stepanov (1610–1658) led some 400–500 cossacks against the Manchu positions on the River Sungari south of the Amur in a riverine fleet of 26 light vessels and 13 heavy cargo carriers. There, they clashed with Manchu bannermen from the Ningguta garrison. The Manchus, under Lieutenant General Šarhūda (1599–1659), a Manchu of the Bordered Blue Banner who commanded the Ningguta garrison, consisted of about 750 men, many of whom were local auxiliaries, in 20 large boats, capable of carrying 17 men each, and 140 small birch bark vessels, each of which could carry four to five men. Among Šarhūda's men were also about 150 Korean soldiers, of whom 100 were musketeers under a senior Korean officer, Byeon Geup.[10] The locals called the Korean musketeers 'Big Heads' (Korean: *daeduin*), apparently because of their hats or, more likely, distinctive tasselled kettle hat helmets of a style that previously was unknown in the region.[11] Šarhūda's men dug in on the shore. When Stepanov's flotilla arrived, they were greeted by strong artillery and musket fire. Stepanov then attempted to storm the entrenched Manchus and Koreans but failed. As the Russians retreated, Šarhūda's men pursued them, inflicting serious casualties on the Russians for a day or two. Temporarily giving up the plan to move deeper into Manchuria, Stepanov built a fort at Kumarsk, overlooking the River Kumar just north of the Amur.

In March 1655, Minggadari (d. 1669), a Mongol of the Plain White Banner, led a Qing army against the Russian fort at Kumarsk. The fort had a garrison of 510, supported by one large and two small cannon. Minggadari's army reportedly consisted of 1,000 Qing soldiers supported by possibly (but improbably) up to 9,000 local auxiliaries. However, Kumarsk was built with earthen ramparts and more heavily fortified than many other Russian forts in the region. Its defences may even have included primitive bastions. As a result, Kumarsk withstood the Manchu artillery bombardment, and Minggadari's assault failed. Soon, the Manchus had to retreat because of a lack of supplies. This did not prevent the Qing from celebrating Minggadari for his apparent victory.[12]

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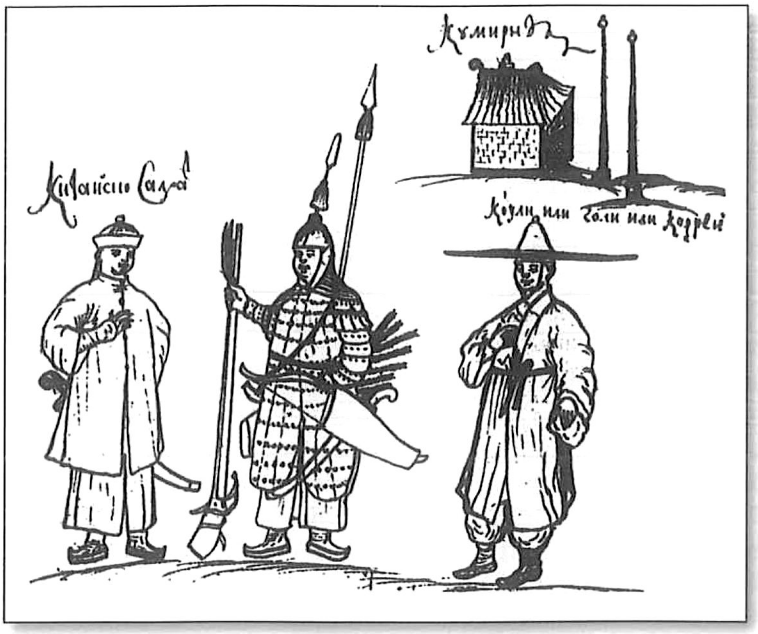
[8] If Khabarov's somewhat exaggerated report is to be trusted, the Russians gained the victory and killed 676 Manchus, against a mere 10 Russian dead and 76 wounded.

[9] Dmitriy N. and Nikolay I. Nikitin, *Pokoreniye Sibiri: Voyny i pokhody kontsa XVI – nachala XVIII veka* (Moscow: Russkiye Vityazi, 2016), pp.48–50; Lincoln, *Conquest*, p.69.

[10] Kang, 'Big Heads', pp.160–63.

[11] The designation 'big head' derives from a comment on headgear (毛笠, *jonnin*) noted by the Korean officer Sin Ryu, who served on the Amur in 1658. Kang, 'Big Heads', p.163, translates the type of headgear as 'feathered hat', while T. M. Simbirtseva, 'Dnevnik generala Sin Nyu 1658 g.: Pervoye pis'mennoye svidetel'stvo o vstreche russkikh i koreytsev', *Problemy istorii, filologii, kul'tury*, 13 (2003), p.338, simply translates it as 'helmet'. The first character of the word implies something covered with 'hair' or 'wool', while the second character means 'headcover'. Based on known Far Eastern seventeenth-century military terminology, a helmet with a large, hairy tassel seems the most appropriate translation.



Manchu bannermen and a Korean officer, as depicted in an eighteenth-century Russian drawing. The yangban officer's civilian hat clearly made an impression on the Russian observer, but this tells us nothing of what impressed the locals in the 1650s. (Anon.)

Nonetheless, Stepanov continued to raid the Amur region with his fleet of ships. In 1657, the Qing accordingly upgraded Ningguta to the status of a permanent garrison, under the command of the experienced Lieutenant General Šarhūda.

Having resolved to clear out the Russians, in 1658, Šarhūda led a large Qing fleet of 40 large and 12 small ships, with an estimated 1,400 Manchu and Korean soldiers aboard, and 50 cannon. The Korean contingent, 260 men, out of whom roughly 200 were musketeers and artillerymen, was commanded by Sin Ryu (1619–1680), a senior officer like his Korean predecessor on the northern front. The Koreans were not the only musketeers and artillerymen in the expedition; an approximately equal number of Qing musketeers and artillerymen participated, too.

Šarhūda caught up with Stepanov on the river. In the ensuing battle, which was fought both on the river and the shore, the Qing soldiers killed Stepanov and about 220 or 270 of his estimated 492 cossacks (records differ). The number of Russian wounded is unknown. Of the 11 Russian ships and boats, only one escaped. The Qing also freed more than 100 local women whom Stepanov's men had captured and held on their boats. Qing casualties were 110 dead and 200 wounded, including eight dead and 25 wounded Koreans.[13]

Upon his death the following year, Šarhūda was succeeded by his son, the aforementioned Bahai, who continued his father's strategy. Manchu forces actively sought out and defeated Russian stockades along the Amur. In one of these raids, in 1660, Bahai defeated a Russian expedition at the juncture of the Sungari and Amur Rivers. Bahai reported to Peking:

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[12] Nikitin and Nikitin, *Pokoreniye Sibiri*, p.56.

[13] Kang, 'Big Heads', pp.164–69.

> We concealed our warships along both banks of the river. When the enemy boats arrived, we came out of our hiding and the enemy immediately retreated. Our soldiers pursued them and the enemy deserted their ships and attempted to flee along the shore. We beheaded more than 60 of the enemy and a great number of them drowned. A total of 47 women were captured. We also took firearms, shields, armour, and other implements of war.[14]

Due to these defeats, official Russian involvement in the region came to a halt, and only outlaws and renegade cossacks remained on the Amur.

In 1662, Bahai was appointed military governor at Ningguta, a position that he would retain until 1682. He took major steps to ensure that northern Manchuria was brought firmly under Qing rule. He also enlarged the garrison at Ningguta, which henceforth came to serve as a base from which to control the various tribes in the region. As noted, Bahai incorporated some of them into the banner system as 'New Manchus'. Bahai also continued to monitor Russian activities. In 1665 and 1668, he led garrison units from Ningguta up the Sungari and Amur Rivers, where he defeated bands of cossacks.[15]

In 1672, Russian regulars returned to the region. Renewed hostilities broke out between Russians and natives tributary to the Qing. It took some time before the Qing could respond since, in 1673–1681, they were preoccupied by the much more serious Revolt of the Three Feudatories in southern China. Yet, in the years between 1676 and 1684, the Kangxi emperor sent large numbers of additional soldiers to the region. He established a new military command at Jilin (Kirin), to the west of Ningguta. The new base was complete with shipyard facilities for the construction of war junks, many of which were now being built for use on the Amur. The new fleet was then being trained for river warfare. Manchu expeditionary forces were also sent to the Okhotsk coast to assert Qing sovereignty. From 1680, the Qing established a line of fortifications around the Manchurian borders. Lieutenant General Langtan (1634–1695), a Manchu of the Plain White Banner who served as the local Qing commander, constructed a new town at Aihun (known to the Russians as 'Aygun'), which he used as a base of operations. In 1683–1684, Langtan also successfully cleared out the Russians on the Zeya, Selemya, and Tugur Rivers and destroyed their three forts.[16]

However, the Russians had also built and fortified a settlement named 'Albazin' (earlier known as 'Yaksa') at the most northerly point on the great curve of the Amur. The fort, originally founded by Khabarov in 1651 but destroyed and in 1665 rebuilt by mutinous but soon pardoned cossacks, had been unsuccessfully attacked by Manchu forces already in 1670. In 1682, Moscow attempted formally to annex the Amur region by establishing a governorship in Albazin. Its first (and only) governor (*voyevoda*) became Aleksey Larionovich Tolbuzin (d. 1686), unlike the previous Russian commanders in the region a nobleman with long-standing links to the court.

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[14] Bahai's report, cited in Oxnam, *Ruling from Horseback*, p.163.

[15] Oxnam, *Ruling from Horseback*, pp.164–65.

[16] Crossley, *Manchus*, pp.103, 108, and *Translucent Mirror*, p.296; Oxnam, *Ruling from Horseback*, p.165.

Displeased with the Russian activities, the Qing took measures to evict the intruders. In 1682–1683, Lieutenant General Langtan went deer hunting near Albazin with Brigadier Pengcun (d. 1701), a Manchu of the Plain Red Banner, so that they could compile an intelligence report on the Russian defences. Langtan was an active officer who had already been appointed an Imperial Bodyguard at age 14, so he was surely the right man for the mission. They found that the wooden fort at Albazin was well defended, with both artillery towers and a moat, outside of which was another palisade and various other defences such as pits with hidden iron stakes. Langtan and Pengcun reported that they nonetheless could take the Russian stronghold with 3,000 soldiers and 20 cannon, with the men advancing overland and the supplies transported by boat from Aihun.

By then, Qing military engineers had developed a naval infrastructure with boats and junks for troop transportation and grain supplies, teams of draft animals, and troops trained in riverine warfare (and even ice skating). This, in 1684, enabled Lieutenant General Pengcun to bring up a Qing army from Peking, with a strength of probably 3,000 men (although Russian sources say 5,000) with 30 cannon. Langtan had temporarily fallen out of favour and lost his rank, but he joined the mission as a staff officer and, as could be expected, played a very active role in the operation. The Qing army also included 400 or 500 veteran sword-and-buckler men from Fujian and Taiwan now under Pengcun's personal command.[17] On the frontier, tribal Mongols joined the Qing army.

The Qing fleet reached Albazin on 10 July. At the time, Tolbuzin had 450 men and three cannon with which to defend the fort. Despite Albazin's extensive wooden fortifications, these were built to protect against natives armed with bow and arrows, so they could not withstand real artillery fire. Eyewitnesses retold how some Chinese cannon balls flew right through the fortress, crashing through both the northern and southern walls. Fires broke out in Albazin, destroying grain barns and a church with a bell tower. One of the three Russian cannon was destroyed, and about 100 Russians were killed or wounded in the bombardment. Nonetheless, the Russians managed to push back the Qing assault on 16 June.

Yet Tolbuzin realised that it would be impossible to hold the fort. Complying with the Manchu demands, the Russians, 10 days later, surrendered their arms and evacuated the fort.[18] The Manchu impact had indeed been so strong that a total of 45 cossacks with families instead defected to join the Manchu banners. The Manchus accepted their defection, and the cossacks provided the core for a new banner unit henceforth known as the 'Albazinian bannermen'. As we have seen, it was not for their military prowess that the Manchus accepted them. The Qing had vainly hoped to find somebody qualified to teach Russian; however, all proved illiterate, and many of the new bannermen were probably Inner Asians in Muscovite service.[19] They were settled in north-eastern Peking and, although henceforth intermarrying with Manchus and Chinese, retained their Orthodox faith, with services in a church in Peking.

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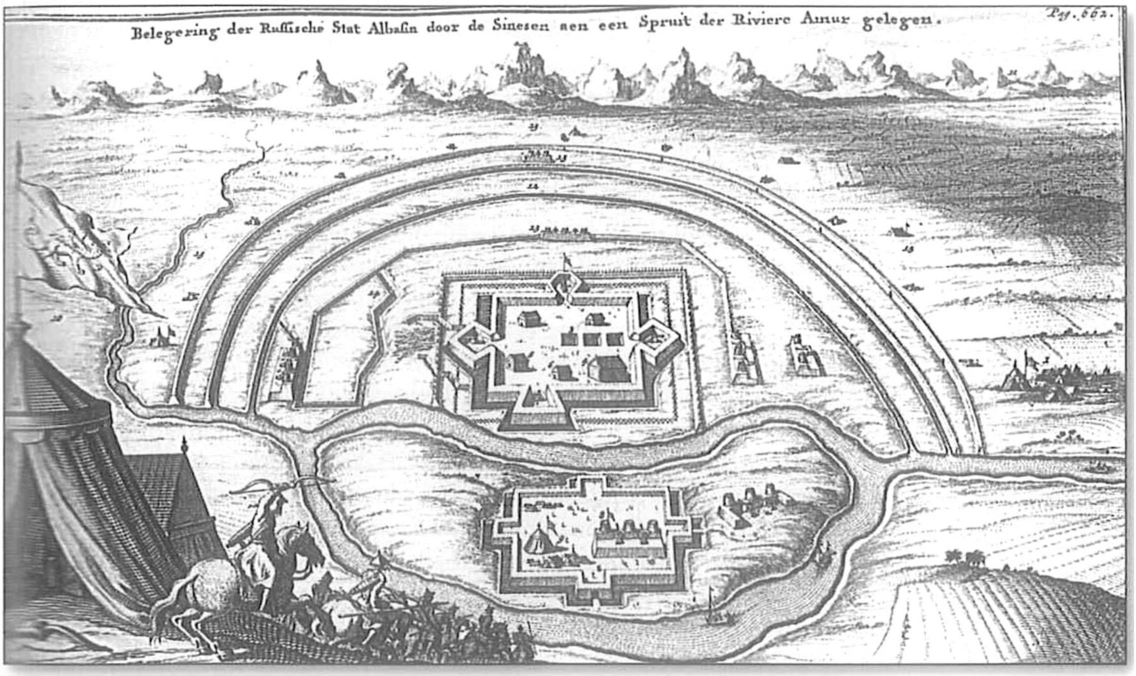
[17] Before Taiwan's submission in 1683, some of these men served under the last genuine Ming loyalist, the half-Japanese pirate warlord Zheng Chenggong (1624–1662), known to Europe as 'Coxinga', who, just before his death, had retaken Taiwan (Formosa) from the Dutch East India Company.

[18] Nikitin and Nikitin, *Pokoreniye Sibiri*, pp.63–65. See also, for example, Stephan, *Russian Far East*, pp.30–31; Lincoln, *Conquest*, pp.71–72; Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.150–53; Forsyth, *History*, pp.106–08; Mancall, *Russia and China*, pp.115–40.

The Manchus then destroyed Albazin.

However, in August, as soon as the Manchu forces were gone, Tolbuzin and more than 500 armed men (514 soldiers and 155 fishermen and peasants) returned with supplies to last a year to rebuild the fort with more modern defences. These included earthen ramparts better to resist the Qing artillery and what, based on a map later drawn likely based on an eyewitness, a Prussian in Russian service called 'Afanasiy Ivanovich Beyton' (d. 1701), looks like several angled bastions. Beyton was in Albazin, where he ultimately assumed overall command. Tolbuzin and his men also brought a dozen cannon (eight bronze cannon, three small iron cannon, and a mortar), hand grenades, and plenty of gunpowder. Soon, yet more men arrived, increasing the number of Russians to 826.[20]


Belegering der Ruſſische Stat Albaſin door de Sinesen aen een Spruit der Riviere Amur gelegen.
Pag. 662.

The rebuilt defences of Albazin, based on a description probably by Afanasiy Beyton, a Prussian officer and military engineer in Russian service. During the subsequent siege, the Manchus built a bastion (lower centre), which also housed the Qing command post. The moats are believed to have been built before the Russian arrival. The Russians used them, together with a wooden palisade, to protect the 'trading quarter' (*posad*), which, as usual in Russian settlements, was located outside the wall and housed the market, peasants, fishermen, and artisans. The Qing army was encamped outside the entrenchments. When Russian casualties rose and the trading quarter could no longer be defended, the survivors moved into the fort. (Nicolaas Witsen, *Noord en Oost Tartarye*, 1705)

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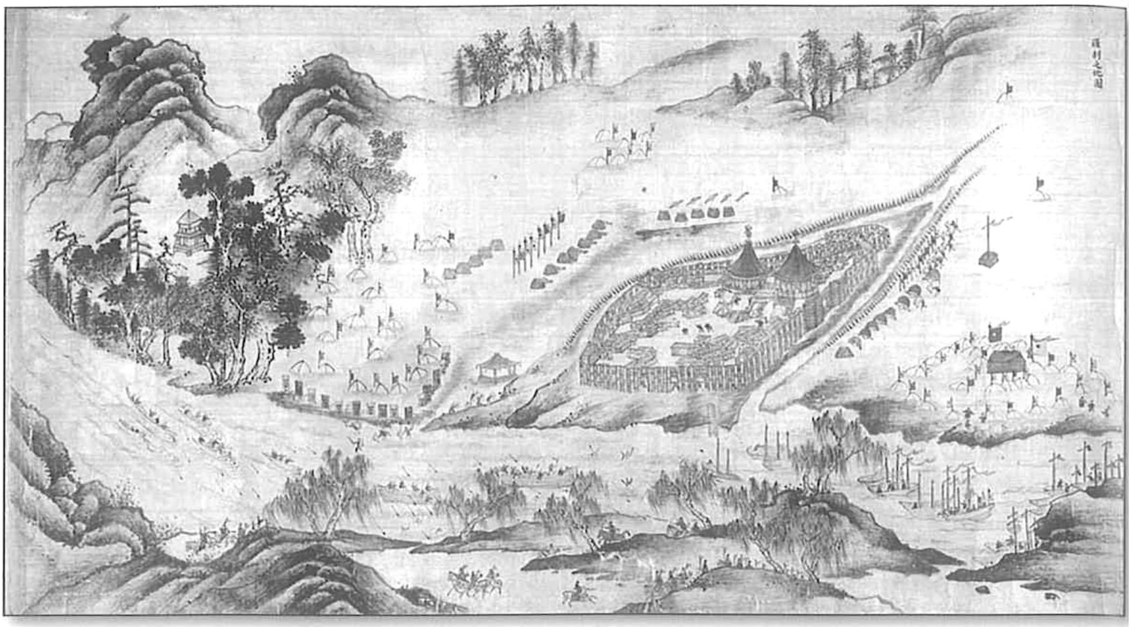
[19] Crossley, *Manchus*, pp.81, 102, 104, 213–14; Rawski, *Last Emperors*, p.242; Mancall, *Russia and China*, p.133.

[20] Nikitin and Nikitin, *Pokoreniye Sibiri*, p.70.



A painting commonly believed to simultaneously show the two sieges of Albazin, by a Qing participant in the sieges. The fort is here presented in its earlier form, without extensive new fortifications. (Anon., 1697)

It was obvious to the Manchus that the mission to push out the Russians was not yet concluded. On 7 July 1686, another Manchu fleet landed at Albazin. The fleet, larger than the previous one, disembarked 5,000 men and perhaps as many as 40 cannon under Sabsu (d. c. 1700), a Manchu of the Bordered Yellow Banner who served as military governor of the Amur River Region. Langtan was apparently in operational command, serving as Sabsu's deputy.

The new earthen ramparts caused some difficulties for the Qing artillery. Yet 40 Russians were soon killed in the bombardment, including Tolbuzin, who lost his leg from a cannon ball already on 12 July and died four days later. Beyton assumed command in his stead. Yet the siege soon went bad for the Russians, many of whom ultimately succumbed to scurvy and other diseases. Meanwhile, the Qing built trenches, siege works, and an entire bastion opposite Albazin to make sure that the Russians could not get out or bring in fresh supplies.[21] They also built siege towers and mantlets to enable and protect an assault. Nonetheless, the defenders occasionally sallied out, most credibly on 16 August, when they proved the efficiency of hand grenades against the Qing and almost reached a Manchu battery of cannon.[22] Having failed to carry the fort by assault, and with winter approaching, the Manchus settled in to starve out the Russians. By December, barely 70 defenders remained alive, half of whom soon succumbed to disease and starvation.[23] By then, negotiations had commenced between the Qing Empire and Russia. Although this resulted in a de facto ceasefire, the survivors of Albazin surrendered and withdrew in May 1687. The fort was again destroyed.

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[21] For a report on archaeological excavations at Albazin, see S. P. Nesterov, 'Albazin, a Russian Town on the Amur: Population Size in the Late 1600s', *Archaeology, Ethnology & Anthropology of Eurasia*, 45:2 (2017), pp.113–22.

[22] Nikitin and Nikitin, *Pokoreniye Sibiri*, pp.70–72.

Negotiations followed on Russian territory, held there between the Manchu Prince Songgotu (d. 1703?) with the linguistic support of the Jesuits Jean-François Gerbillon and Tomé Pereira from the Qing capital and the Russian emissary Fyodor Alekseyevich Golovin. The negotiations took place under the very real threat of a strong Manchu army (reportedly 12,000 Qing and local allies supported by at least 2,000 Buryat and Onggut Mongols) with 50 cannon. In reality, the Qing numbers included servants, so real fighting strength was significantly lower than what the force gave impression of. Even so, Golovin could not fail to see that he was heavily outnumbered. On 7 September 1689, the two parties concluded the Nerchinsk Treaty, according to which Russia had to abandon the Amur region to the Manchus. This treaty, together with the later Treaty of Kyakhta, signed on 1 November 1727, delimited and, with the exception of a single trade route (through Kyakhta), closed the Manchu–Russian border. Henceforth, relations were generally peaceful, as Russia did not have the resources to match Qing military power in the region.

Steppe Campaigns against Galdan and the Battle of Jaghun Modu, 12 June 1696: Manchus versus Mongols

In 1696, the Kangxi emperor was finally ready to move against the Oirat Mongol ruler Galdan. This resulted in a pure steppe campaign that, in its fluid execution, showed little in common with the sieges and riverine operations already described – except the prudent Qing insistence on logistics and efficient organisation.

The Kangxi emperor had already once, in 1690, led an expedition against Galdan. Qing soldiers had, on 3 September 1690, inflicted what they described as a serious defeat on Galdan at Ulaan Büdüng despite reports that Galdan's men attempted to withstand the Qing firearms by sheltering behind camels armoured with felt.[24] However, due to shortages in supply, the Qing units were too exhausted to follow up their victory by pursuing Galdan and his remaining men. This resulted in a six-year period in which the two rivals, the Kangxi emperor and Galdan, could not reach each other due to logistical constraints but worked to cut each other off from vital allies and supporters in Mongolia and Tibet.[25]

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[23] Basil Dmytryshyn, E. A. P. Crownhart-Vaughan, and Thomas Vaughan, *To Siberia and Russian America: Three Centuries of Russian Eastward Expansion: Russia's Conquest of Siberia: A Documentary Record, 1558-1700* (Portland: Oregon Historical Society Press, 1985), vol. 1, pp.482–83.

[24] Wolfgang Romanovsky, *Die Kriege des Qing-Kaisers Kangxi gegen den Oiratenfürsten Galdan: Eine Darstellung der Ereignisse und ihrer Ursachen anhand der Dokumentensammlung 'Qing Shilu'* (Vienna: Österreichische Akademie der Wissenschaften, 1998), pp.109 n.1, 110 n.2, 117 n.1, 148; Perdue, *China Marches West*, p.155. The Manchu officer Maska described how the enemy had 'bound the feet of 10,000 camels, covered them with felt, and lay down behind them, spread out like a wall. We called it a "camel wall". They shot arrows from slits in the wall'.

By 1696, the Qing had successfully built up a supply network that allowed campaigns in distant western Mongolia. The Kangxi emperor and his senior banner officers therefore worked out a basic strategy to come to grips with Galdan based on the use of two main strike forces in a giant pincer maneuver: a western army of 10,790 men under Fiyanggū (1645–1701) that would set out from Ningxia and a central army under the emperor of 8,130 soldiers that would set out from Peking across the Gobi desert. The aforementioned Lieutenant General Pengcun was appointed chief of staff for the campaign. An eastern expeditionary force consisting of 3,000 men under Sabsu was also mobilised, together with 4,000 Khorchin Mongols. Most of the eastern units eventually ended up with the central army. Each cavalryman would be provided with four horses, one servant, 80-days' basic rations, and an extra two pecks of rice per month. Each gunner was provided with the same rations, except that two gunners would have to share one servant. Rations for servants, fodder for camels, and the required number of carts were also provided.[26] The Qing armies set out on 1 April 1696, bringing huge herds of cattle and sheep with them as mobile supplies. Exactly how huge the herds were are unknown, but, on a later campaign by the end of the year, the Mongols were impressed with herds as large as 16,000 cattle and 70,000 sheep.[27] The armies also brought plenty of artillery, at least 235 large cannon each weighing from 8,000 to 10,000 catties (4,800–6,000kg) and 104 light cannon each weighing from 100 to 800 catties (60–480kg). The cannon, or at least the lighter ones, were transported on camelback. In the final count, however, Fiyanggū's army only managed to bring 59 light cannon to the actual field of battle, carried by camel. All the rest had to be left behind due to snow, mud, and a lack of roads.[28]

The Kangxi emperor then sent envoys to Galdan, who, by then, was on the Kerülen River. He expected, based on his knowledge of Galdan's character and intelligence prepared well in advance, that Galdan, having met the envoys, would then flee westwards, which would lead him straight into Fiyanggū's army. Meanwhile, Qing scouts watched for the smoke of the Oirat army's campfires and, based on the evidence of hoofprints and horse dung, assessed the enemy's movements. As predicted, Galdan began to move west.[29]

The emperor's army then set off in pursuit of Galdan's force. First, the Qing established a fortified base camp where they left the sick horses and the servants on foot. Meanwhile, Galdan and his men discarded whatever they did not need or could not bring to move faster. As the pursuit intensified, the Qing first left behind the Green Standards infantry, then the artillery (by then only 16 cannon; all the others had been left behind much earlier). At last, near the Kerülen River, the emperor sent on ahead only a flying column of cavalry under the experienced General Maska (d. 1704), a Manchu Imperial Bodyguard of the Bordered Yellow Banner. The Kangxi emperor described the pursuit:

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[25] Romanovsky, *Kriege*, *passim*, in particular pp.187–98 with notes; Perdue, 'Qing Empire', pp.62–64. On the campaigns against Galdan, see also Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, pp.153–56; Perdue, *China Marches West*, pp.138–61, 174–208.

[26] Spence, *Emperor of China*, p.19. See also Romanovsky, *Kriege*, p.190 n.5. Very different and much higher numbers are given in Perdue, *China Marches West*, p.181. These figures, based on Chinese-language sources, may include servants, carters, accompanying merchants, and so on. Even so, the figures provided by Spence correspond roughly with those of Perdue, in so far as the battle itself is concerned. For further information on the Jaghun Modu campaign and, in particular, details on the logistics involved, see Perdue, *China Marches West*, pp.180–90.

[27] Perdue, 'Qing Empire', pp.64, 69.

[28] Perdue, *China Marches West*, pp.184, 186.

[29] Spence, *Emperor of China*, p.20.

> Our soldiers have chased the Oirat now for five days. I have seen their abandoned Buddhist scriptures and tents, the women and children and the sick whom they slew themselves, their fish kettles and their brewing apparatus, their hunting nets and their armour, their saddles and bridles and clothes, their food, the wooden spoons still standing in the bowls of soup, their leather skins filled with kumiss – all these poor items of their daily life, all thrown away.[30]

Galdan fled into the Manchu trap, being intercepted by Fiyanggū and his men near sunset on 12 June 1696 at a place known as 'Jaghun Modu' (meaning 'one hundred trees' in Mongolian), a small valley with a river at the bottom, surrounded by hills. Galdan's army consisted of from 5,000 to 10,000 men, of whom about 2,000 had muskets (*niaoqiang*). The numerically probably somewhat stronger Qing army, which, for the last 11 days, had subsisted only on horseflesh and camel meat, immediately fought its way, on foot, up onto the hills despite having to skirmish with Oirat Mongol sharpshooters, also dismounted, during the ascent. This gave the Qing soldiers a vantage point for their artillery. The Qing had brought artillery, the 59 light cannon, and muskets (*niaoqiang*) in addition to the usual archers, and the firepower broke Galdan's charge. The Qing cavalry then counterattacked, broke, and pursued the Oirat troops across the steppe during a four-hour running battle that covered a distance of 15km. Galdan himself managed to break out and escape, but over 2,000 (one Qing report says over 3,000) of his men were killed.[31] More than 100 Oirats were captured in the battle, and another 1,000 or more surrendered afterwards. Galdan's wife, Anu, was also killed in the battle, and his son was subsequently captured by the Muslim *begh* (ruler) of Hami.[32]

After the battle, the Qing embarked upon their by now customary psychological warfare campaign by printing and distributing hundreds of leaflets among the Oirat Mongol princes, urging them to join the Qing and to capture the remaining members of Galdan's family.[33]

Later in the year, the Kangxi emperor again set out against Galdan, who, by then, had been reduced to a following of no more than 600–700 men.

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[30] Spence, *Emperor of China*, pp.20–21.

[31] Spence, *Emperor of China*, p.21; Romanovsky, *Kriege*, pp.197 n.3, 198; Perdue, 'Qing Empire', p.64.

[32] Peterson (ed.), *Cambridge History of China*, vol. 9, part 1, p.155; Romanovsky, *Kriege*, pp.198–99; Perdue, *China Marches West*, p.199.

[33] Perdue, 'Qing Empire', p.68, and *China Marches West*, p.191.

In spring 1697, the emperor despatched two expeditionary forces against Galdan, one from Ningxia and one from Jiayuguan. Because the Qing knew of Galdan's current weakness, these forces were both light and fast, consisting of only 3,000 men each. Galdan was eventually found dead, abandoned by almost all his followers.[34]

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[34] Spence, *Emperor of China*, p.22; Perdue, 'Qing Empire', pp.71–73, and *China Marches West*, pp.198–203.

9

Concluding Remarks

The emphasis of this study has been on the Manchu, or Qing, army in the seventeenth and early eighteenth centuries because this, as noted, was the time when the Manchu military system developed its own characteristics and reached maturity. While doing so, we have seen that the Qing army achieved a number of significant victories and conquered vast territories.

The most important Manchu conquest was Ming China. The Manchus consistently achieved victories against numerically superior Ming armies, which would seem to indicate that they had developed a military system superior to that of the Ming. We have seen that the Qing military operated as combined-arms armies, successfully combining the various strengths of cavalry, infantry, and artillery. Unsurprisingly, the Qing army was, for cultural and historical reasons, particularly strong in cavalry, not least because it had incorporated numerous Mongols in its ranks. This intimate level of cooperation with steppe nomads and the deep understanding thereby gained of steppe politics and political systems of nomadic Inner Asia enabled the Qing state to extend its borders farther to the north and west than any previous ruler of China, with the single exception of Chinggis Khan and the imperial Yuan Mongols. The Manchu imperial army pushed the empire's borders far beyond those of Ming China. When it comes to territory, modern-day China owes a huge debt to the Manchu conquests.

On the other hand, the limited manpower available to the Qing suggests that, despite a successful military system, the Manchus would probably not have been able to conquer all of China unless the Ming state had already been crumbling due to internal weaknesses. There is, of course, no way of knowing how the Qing would have fared against a stronger and more unified Chinese state.

The Qing army, due to its combined-arms characteristics and well-functioning logistical system, also successfully defeated its various rivals on the steppe. This was no mean achievement because, in particular, the Oirat empire was also experimenting with modern weapons and was in touch with the rapidly growing Russian empire. On the other hand, time was running out for the nomad way of life and even more so for the viability of great nomad empires, such as had existed in the past. Heavy firearms in particular and eventually improved means of transportation, in conjunction with the limited resources in manpower of nomad societies, saw to that. Even so, it seems clear that the Qing military system was superior to that of the imperial nomad armies as well.

In the tropical countries to the south of China, the Qing army experienced both victories and serious losses, especially to disease. We have seen that, in this, they showed similarities with the various European armies that, in the seventeenth and eighteenth centuries, also began to take an interest in the countries of this climate zone.

The small numbers of Portuguese colonial soldiers in southern China proved no obstacle to Qing conquests in the seventeenth century. Since these Portuguese units were hardly typical of the European armies at the time, the perhaps clearest indication of the versatility of the Qing military system was its successful containment of the very active Russian expansion then underway. We have seen that the Qing dictated the two Treaties of Nerchinsk in 1689 and Kyakhta in 1727, which delimited the Manchu–Russian border, and that the border selected by the Manchus remained unchallenged until the second half of the nineteenth century. Indeed, the border delimited at that time forms the backbone of the national borders of the region to this day. There is no doubt that the Qing army, at the time of the treaties, could defeat Russian regulars and cossacks in the field. The Qing were superior in logistics, siege warfare, and even, it would seem, artillery. On the other hand, Russia was seriously distracted by other wars in Europe at the time and did not regard the developments in the Far East as desperately vital to the Russian state.

This leads to the question of how the Qing army would have fared against a regular European army of this period. Again, there is no way of knowing for sure since there never was a major confrontation between these two military systems before the nineteenth century. By then, having already conquered one of the largest empires ever gained and exchanged its earlier aggressiveness for complacency, the Qing state had begun to close in on itself, and its army had ceased developing.

However, this process of complacency, as has been shown, only really set in during the last two decades of the eighteenth century. Had the confrontation between Qing and Europe occurred earlier, the outcome would not have been quite as predictable. Even without taking such important geographical constraints as the great distances into account, it would seem that, in the seventeenth century, the Qing military system would have been able to hold its own against any European army, even another combined-arms army such as those of the contemporary Swedes, Dutch, or indeed Ottoman Turks. If the confrontation had taken place on the steppe, in open terrain, the Qing might even, through its superior cavalry, have been better adapted to win a contest of arms.

It is considerably more difficult to assess the outcome in a hypothetical confrontation between the eighteenth-century Qing army and any of its European counterparts. Both cultures had made significant changes in their military systems, for instance, by dropping the widespread use of armour. The Western armies had gone further and adopted a number of innovations such as linear tactics and the firing of volleys. The gap between the military technology employed by the Qing and the West was also widening, with the Westerners adopting flintlock muskets, bayonets, and better artillery. How much difference would this technological advantage have made? Would a formed line of Western infantry have been able to withstand determined harassment by Qing horse archers? Would bayonet-armed infantry have enjoyed an advantage against Qing infantry armed with spears? It should be remembered that the Swedish army, with some justification, continued to trust in the use of pikes as late as in the first decades of the eighteenth century. On the other hand, then pikes were discarded as obsolete everywhere in Europe. Perhaps one can hazard a guess that an eighteenth-century Western army would have held a definite technological advantage over the Qing but that its linear tactics would have been useless in the broken terrain of southern China or indeed in parts of India and all of Indochina while the tactical mobility of the Qing cavalry probably still would have enjoyed an advantage of sorts in a steppe encounter.

There is, however, no doubt whatsoever that the West, by the eighteenth century, if not already in the seventeenth, had gained naval superiority. The Qing empire, as noted, never was a major naval power and had no blue-water navy.

By the early nineteenth century, the Qing empire was in as bad a condition as the Ming empire had been in the early seventeenth century. Not only its military system but also its entire organisation of local and central administration were obsolete. The empire was plagued by rebellions, banditry, and widespread social disorder.

The inability of the traditional armed forces to deal with either the Taiping rebels (1851–1866) or Western troops in the Opium War (1839–1842) and Arrow War (1856–1860) forced the introduction of several modifications in the Qing military system. The Qing lost almost every battle against Western armies, and foreign observers such as the already-mentioned A. E. J. Cavendish, in his 'The Armed Strength (?) of China' (1898), began to wonder whether it was 'a libel on the human race to say that out of the manhood of 300 millions of Chinese a body of good soldiers cannot be made'. Even so, there were victories for the traditional Qing military system. On the tactical level, we have seen that the Mongol Prince Senggerinchin successfully repulsed the British and French naval landing at Dagu in 1859. On the strategic level, it should be noted that the Russian soldiers who marched into Ili in 1871, following a Muslim revolt against Qing rule there, were indeed compelled to withdraw after the Qing army returned in force to restore order in 1881.

One could argue that modernisation in the form of westernisation reached the Qing military first before other aspects of Manchu or Chinese society were markedly affected by the impact of Western customs and technology. Even so, it took the defeat in the Sino-Japanese War (1894–1895) to make the Qing officials fully aware of the urgent need for modernisation. By then, it was already too late for the Qing to ensure its survival through the implementation of a comprehensive reform programme, even if such a programme had been successful – which it was not. The Manchu Qing empire came to an end in the Chinese revolution of 1911.

Colour Plate Commentaries

A. Banner Officer in Full Armour

Females occasionally served in the army, including as banner officers, at least during the conquest of China. Although none seems to have attained a higher rank than that of lieutenant, they held command and served in combat. Manchu females continued to enjoy significantly more freedoms than their Chinese counterparts for the duration of the Qing period. They practiced horseback riding, and riding dress remained part of Manchu female costume. In contrast, many Chinese families practiced the traditional custom of foot binding to enhance the beauty and status of their young daughters. Foot binding was painful and limited the physical mobility of women. The early Manchu emperors attempted to forbid the practice, but failed.

Male and female banner officers wore identical arms and armour. This banner officer wears the characteristic brigandine *ding jia* ('armour with nails'), so named because it was reinforced with rows of round-headed rivets (*ding*), visible on the outer fabric, which was generally cotton. The rivets secured the armour plates that lined the inside of the armour. Innermost was an internal cotton lining. Manchu armour consisted of several pieces: a short jacket or bodice, with or without sleeves, an ankle-length divided skirt akin to a split apron, and a number of additional and separate protective sections, buttoned or fastened together with flat cords over the jacket. These included semicircular shoulder defences, deep crescent-shaped armpit gussets beneath the arms, and a generally rectangular groin apron over the lower front of the jacket. Another rectangular section was often mounted from the left armpit gusset. The right side needed no extra protection, as the quiver often was reinforced with metal. The sleeves were commonly made of brigandine early in the period. Later, they often consisted of mere cloth.

On her head, this officer wears a lacquered conical helmet of Mongolian style with a small brow-plate cusped over the eyes. The cheek and neck flaps can be fastened with buttons across the throat and was often lined with plates. The helmet lining consists of a quilted conical skullcap with chin-cords, worn fastened to the head.

All banner officers wore the Manchu knee-high satin riding boots (*ma xue*), invariably plain black with thick white soles. Boots were always used with full armour.

This officer is armed in the customary Manchu manner, with sword, bow and arrows.

B. Manchu Infantryman of the Firearms Regiment

The soldiers of the firearms regiment primarily served as infantry. As the regimental name suggests, most were musketeers. However, all bannermen were accorded the status of cavalrymen, and the unit would serve on horseback whenever needed. For this reason, a soldier of this regiment typically carried a bow and arrows as well as a matchlock musket, with a sword as a sidearm. Likewise, the men of the firearms regiments wore knee-high riding boots in customary Manchu style. All regular soldiers were issued the characteristic Manchu military round hat with a black upturned brim of satin and a slightly conical, padded, red crown covered in crimson strands of silk radiating from its apex.

This infantryman is armed and equipped according to these regulations, although he has covered his riding boots with leg wrappings all the way down to the ankles and is only testing his musket, having not yet added the slow match with which to fire it. In the field, it was customary for banner infantry of the Qing imperial army to wear armour only on the upper body. If so, banner soldiers commonly wore a divided battle skirt (*zhanjun*) akin to a split apron as additional protection. This was a garment of a type similar to those used in full armour but without the added brigandine protection. In effect a kind of leggings, they would protect a horseman's trousers from scratches produced by brushing with thorny plants or branches. Contemporary illustrations of Manchu soldiers suggest that for convenience most men removed the battle skirt when serving on foot.

This infantryman, however, wears the full set. Being a Manchu, he might be expected to mount a horse and serve on horseback anytime and for this he is fully equipped. What distinguishes him from a cavalryman in full armour is primarily the lighter protective gear, with sleeves of unarmoured cloth and the aforementioned leggings.

C. Imperial Guardsman in Field Uniform

The Imperial Guard was a fighting unit, and this shows a guardsman in the practical field uniform used on campaign. In fact, most contemporary depictions of imperial guardsmen show them in the field, when they mostly wore 'travel dress' (*xingfu*). This dress style was widely used and generally regarded as both undress and field uniform. Travel dress consisted of the horse jacket (*ma gua*) or riding jacket, used by most bannermen as a military uniform. Imperial guardsmen close to the Emperor, including this soldier, were permitted to wear the prestigious 'bright yellow horse jacket' (*minghuang ma gua*). This particular guardsman has donned a winter-issue horse jacket, lined with white fur. He has adorned his military hat with a natural 'single-eyed' peacock feather (*danyan hualing*). This was a mark of distinction, awarded to those imperial guardsmen who served in the immediate vicinity of the Emperor. Armed with bow and sword, this guardsman's only protective gear is the leggings-style divided apron worn to protect his garments from thorny plants and branches when mounted on horseback.

D. Infantryman of a Green Standards Unit

Following the conquest of China, Chinese soldiers were enlisted in the newly raised 'Green Standards' units. In the early years, these units functioned in much the same way as the banner forces and often operated in conjunction with them. They also served as engineers in the building of bridges and fortifications. In battle, this infantryman would add a slow match to his musket. However, it was imperative to keep the slow match dry, which might hamper or even preclude shooting in rain.

Green Standards unit were armed and equipped similarly to Manchu units. However, following the wars of conquest they seldom wore armour. Instead, Chinese soldiers commonly wore a traditional garment worn by commoners: the *kanjianer* or *beixin* which was a waist-length, sleeveless jacket, worn over other garments. This infantry musketeer wears such a jacket, in the uniform colour of his unit. Soldiers customarily wore civilian attire under their uniform jackets. Unlike banner units, the infantry of the Green Standards wore shoes, not riding boots. Like any other regular soldiers, they were issued the characteristic Manchu military hat with a black upturned brim of satin and a red crown covered in crimson strands of silk. All male Chinese, regardless of rank, had to adopt the distinctive Manchu queue. They also generally shaved, although many men, including this soldier, retained a narrow moustache.

E. Korean Artilleryman, 1641

The Qing empire could call up the Korean Tributary Army for service. Contingents of Korean artillerymen provided a useful source of firepower to the Manchu army in the early years of the empire. This artilleryman belongs to the contingent which served under the Manchu Prince Jirgalang in 1641. Earlier in the century, the Koreans would have been likely to bring rocket launchers as well as cannons, but from the mid-seventeenth century onwards, cannons constituted the more important arm.

The Japanese invasions of 1592–1598 and the Manchu invasions of 1627 and 1636–1637 caused major changes in Korean arms and armament. This artilleryman wears a style of military hat that was particular to Korea, under which he has wrapped a towel-like headscarf. While helmets of a similar shape, akin to kettle hats, together with Chinese-style helmets, were used by soldiers armed and equipped for hand-to-hand combat, most artillerymen seem to have served without protective armour.

Officers were similar dress, but of better quality. An officer might attach a tassel or peacock feather to his hat or helmet. Some possibly dispensed with armour and helmets altogether and instead wore civilian *yangban* dress, including the characteristic semi-transparent wide-brimmed top hat of the Korean gentry.

F. Korean Musketeer, 1658

The Korean Tributary Army also included infantry musketeers. The Japanese invasions of 1592–1598 had transitioned the Korean army from a force primarily armed with bows into one armed with muskets. Many were trained in volley fire. Korean musketeers were called up on several occasions, including to serve the Manchus against Russian intruders in the Amur region in 1654 and again in 1658 under Šarhūda, an officer of the Bordered Blue Banner. Known as 'Big Heads' because of their distinct helmets with large, hairy tassels, the Korean musketeers played an important role in the Russian campaigns.

Korean musketeers were trained for hand-to-hand combat, so many still wore armour. This musketeer is protected by a cuirass of lamellar armour (*chalgap*), which had a long history in Korea and was one of the most common types of Korean armour. Lamellar armour consisted of metal or rawhide lamellae. The lamellae may have been painted in black lacquer or possibly other colours. Swords imported from Japan, or captured in battle with Japanese, made an impact on Korean styles, and Korean swordsmiths began to employ Japanese methods of forging swords. This musketeer carries a sword forged and fitted in Japanese style.

Korean soldiers received supplies of cotton cloth but had to procure their own garments, so this musketeer mainly wears civilian dress under his armour. His boots, however, follow the Manchu style. Unsurprisingly, the successful Manchu invasions of 1627 and 1636–1637 that transferred Korea's tributary status from the Ming to the Manchu emperors also introduced Manchu military practices and gear into the Korean army. Nonetheless, the Korean army and state retained cultural traditions separate from that of the Qing empire.

G. Tibetan Cavalryman, 1720

When the Qing army, in 1720, marched into Tibet to expel the Oirat Mongols who a few years previously had assumed control over the country, they also made Tibet a protectorate and took over the Tibetan military system, which the Qing henceforth could call up for service.

There was no standing Tibetan army. Noble landowners would raise and arm men as needed, and also serve in person as armoured cavalry. However, the Tibetan military had undergone a transitional phase in the previous century. Horse armour fell out of use, and although the noble cavalrymen still wore personal armour, it consisted of chain mail of the Indo-Persian style that they had encountered in Bhutan, rather than the old lamellar style which derived from Inner Asia. Moreover, it grew increasingly common for noble landowners not to serve in person, but instead provide one or more soldiers and also supply each man with a horse, arms, and accoutrements.

This cavalryman is one of these soldiers. He has received a lance, bow, and musket with an Inner-Asian-style, forked, A-shaped rest from his lord. Matchlocks were used on horseback, in the same manner as a bow, even while riding at a full gallop. The weapons and other gear are of a quality ranging from good to serviceable, but have suffered some wear and tear over the years. The cavalryman's arrow feathers seem to have taken some damage while in storage between wars. This soldier carries a Bhutanese-style sword as sidearm. It may originally have been acquired in Bhutan, or was made in Tibet, where the Bhutanese style by this time was growing popular.

The soldier's armour, too, is Bhutanese in style, which by this time predominated in Tibet as well. This cavalryman, who perhaps serves as a warrant officer or *chupon* (*bcu dpon,* 'leader of ten'), received complete gear including a short-sleeved chain mail shirt reaching to the hips, a set of polished, circular iron disks worn over the chain mail, a polished metal belt, and a simple helmet made of a one-piece, hemispherical iron bowl with upturned ear and neck flaps of fabric.

H. Officer in Full Dress

This officer, a lieutenant colonel (*niru i janggin*; *zuoling*), that is, a fourth-grade military officer who serves as a squadron commander, wears festive dress (*jifu*), colloquially known as full dress, which was expected for official business. While this style of dress may look impractical and cumbersome, it was designed for horseback riding and archery, and was occasionally used on military campaigns.

Festive dress consisted first and foremost of the long dragon robe (*longpao* or *mangpao*), an embroidered robe with slits in front, back and sides, and sleeves with horse-hoof cuffs. The dragon robe was known as a *longpao*, if the robe's dragons were depicted with five claws, which was reserved for members of the imperial family. A dragon robe which depicted dragons with only four claws was instead called a *mangpao*. Most military officers, including fourth-grade officers like this man, wore dragon robes with a plain blue base colour.

The officer hides most of his dragon robe below a calf-length loose-fitting coat (*pufu*). The coat came in a single, sober dark colour, generally (and in this case) stone-blue, had slits at the rear to allow horseback riding and reached to the knees. It had a central front opening, and was buttoned in front with twisted silk cord buttons. All except the highest officials had square silk panels or badges as insignia (*puzi*), sewn onto the coat on the front and back. Since this is a fourth-grade military officer, his panel depicts a tiger. For summer, the coat was made of silk gauze with no lining. For spring and autumn, it was made of silk or satin with cotton lining. For winter, it was frequently lined or edged with sable or white fur. The coat's three-quarter length sleeves were narrow and made in a different material, but allowed sufficient mobility to permit archery. Most sleeves were made of black, ribbed silk or black silk with gold.

Below the knees, where the dragon robe remains visible, it was decorated with a pattern of 'standing waves' (*lishui*), diagonal lines that ended in waves at the top. In front and rear, and also on the sides, the symbolic world mountain rose from the waves, but this design is hidden by the coat.

Festive dress was worn with a hat of a special design, from 1727 decorated with a round button, known as a 'mandarin button' in the West, in a colour and material appropriate to the official's rank. A fourth-grade officer like this one wore a blue sapphire or glass ball on the hat in a blue setting. The hat is of the style designed for use in winter, which was the most common and indeed was sometimes worn throughout the year. This officer carries a peacock feather in his hat as a mark of distinction.

On his feet, this officer wears the typical Manchu knee-high satin riding boots, black with thick white soles.

I. Qianlong Emperor in Ceremonial Armour

In 1758, Giuseppe Castiglione painted a portrait of the Qianlong emperor, riding to the grand review in Nanyuan. The portrait depicts the elaborate armour worn by a Qing emperor. The ceremonial armour worn by the emperor was of silk brocade and gilded copper plates, with each section heavily padded and lined with silk. The splendid suit of armour was covered in imperial yellow silk, embroidered with gold dragons, some red lines, and a black and white wave pattern. Judging from a similar preserved suit of armour, the inner lining was pale blue. On his lower forearms, the emperor wears gilded vambrace-like sleeves. The horse in the painting, incidentally, appears to have been a favourite of the emperor, presented to him by the Kazaks in 1757. (Palace Museum, Peking)

J.

1. Imperial Bodyguard of the Imperial Guards, Brigadier Janggimboo

A Mongol officer's dress was fundamentally identical to that of his men, only more lavish. This depiction of the Manchu Brigadier Janggimboo, in the dress of a Mongol cavalry officer, derives from a series of 50 portraits painted in 1760. Janggimboo wears a quilted coat of the Mongol pattern that reaches well below the knees. The coat is held together with two gilded buttons. He wears an inner robe below the coat and the customary soft boots of a Qing officer. Additionally, Janggimboo sports the typical Manchu winter hat, from which is suspended a mark of genuine distinction bestowed by the emperor: a natural single-eyed peacock feather. (The Metropolitan Museum of Art, New York)

2. Imperial Guard Officer Ma Chang

Giuseppe Castiglione painted several portraits of distinguished imperial officers. This 1759 portrait depicts General Ma Chang, who, in the 1755–1759 Ili campaign in Turkestan, led more than 30 charges against the enemy, for which he was designated 'brave hero' (Manchu: *mergen baturu*). Armed and equipped as a Qing mounted archer in a chain mail shirt over quilted armour, in the decisive Battle of Qurman on 3 February 1759, Ma Chang led a cavalry charge, broke through the enemy ranks, and pursued the Turkestani commander so relentlessly that he found himself separated from his men. Nonetheless, Ma Chang caught up with and killed the enemy commander, even though it took three arrows to finish him off. In the subsequent combat, Ma Chang lost his horse, suffered 10 wounds, but continued fighting on foot until his men reached him, which concluded the victory. The wounds not being too serious, Ma Chang already returned to his command the following day for another battle. (National Palace Museum, Taipei)

K.

1. Imperial Guard Officer Ayusi

This 1755 portrait by Giuseppe Castiglione shows Khar-Baatar Ayusi, a renegade Oirat Mongol who, because of some political enmity or crime committed, had gone into Qing service and came to serve in the imperial guard. Armed with a 'nail spear' (*dingqiang*), a long bamboo spear with a narrow spearhead and a blade glued into the side of the shaft, he is known to have dispersed a significantly larger enemy Oirat contingent by leading 24 men in a surprise charge straight into the Oirat camp at Gadan-Ola. According to imperial sources, Ayusi brandished his lance, whipped his horse, and cried, 'All Qing hearts united! Let the rebels flee like foxes and rats.' His gallantry is incomparable, the imperial chronicle noted. Ayusi wears quilted Mongolian armour (Mongolian: *olbog*), apparently covered by a chain mail shirt, and a Mongolian-style cape, but on it is affixed a natural single-eyed peacock feather (*gong qiaoling*) as a mark of imperial favour. This important award was only awarded to military officers and civil officials of the fifth grade and above. (National Palace Museum, Taipei)

2. Tiger Man

Tiger men (*tengpai yingbing*, 'rattan-shield soldiers') were soldiers specially trained in the martial arts and especially the use of a large, circular, convex shield. Operating as sword-and-buckler men, they were characterised by equipment and dress designed to frighten the enemy, or at least enemy horses. For this reason, the tiger man wore brightly coloured garments with stripes in the manner of a tiger skin, and a cloth helmet with ears made to resemble a tiger's head. He carried a shield on which was painted the stylised face of a tiger.

This particular tiger man was depicted by William Alexander in 1793. Although not all Qing sword-and-buckler were dressed as tigers, the style was introduced into Qing armies already in connection with the conquest of China.

L.

1. Mongol Auxiliary

The Manchus frequently called up Mongol tribal cavalry as auxiliaries for the Qing armies. Typically armed with lance, bow, matchlock musket, and sword, they were regarded as ill-disciplined but good warriors. Most Mongol auxiliaries did not have suits of armour. This photograph, taken by Stefan

Passe in 1913, depicts a Mongol sharpshooter in characteristic Mongolian hat, aiming his musket with the help of an Inner-Asian-style, forked, A-shaped rest. Such musket rests were in common use in Mongolia and Tibet, and we have seen that the Manchus occasionally employed them, too. He also carries a dagger.

This Mongol wears the customary tanned leather and sheepskin coat and baggy trousers. Many Mongols at this time wore Manchu-style boots, but they are not visible in this photograph. This auxiliary is most easily identified as a Mongol from his pointed fur hat. Mongols used several varieties of caps or hats, all of animal skin, with the fur side turned in. Well-to-do Mongols might otherwise wear Manchu dress, and if so, it was the fur hat that identified them as non-Manchus. This Mongol auxiliary has also adopted the Manchu hairstyle, which was common among, but not required, for Mongols.

2. Qing Soldiers

Qing soldiers are going through their drills, as depicted by the Qianlong emperor's court artist Xu Yang. The painting shows most types of soldiers in the Qing army, including tiger men, musicians, and soldiers armed with matchlock muskets, long jingals, and field artillery. Both armoured and non-armoured men take part. In the background, a cavalryman fires his musket at the gallop, under the close supervision of military officials. Unlike the infantry, which is depicted in field uniforms, the cavalrymen have shown up in mostly civilian dress. (Xu Yang)

M-N. Grand Review of the Imperial Army

The Qianlong emperor commissioned his court painter Xu Yang to record, in 12 monumental handscrolls, the emperor's 1751 inspection tour of southern China. During the leisurely tour, the emperor also held a grand review of his army. These details show the various units of the imperial army lined up for inspection in full battle gear, with uniforms and standards in the colour of their respective banner units.

O-R. Standards of the Eight Banners

Each banner formation had its own colours. The banner organisation reached its final form in 1616, when Nurgaci also decreed which colour and shape each banner standard would use. The standards were employed both for parades and in the field. Eventually, the banner colours became associated with the colours of traditional Inner Asian and Chinese cosmology. The yellow represented the centre (and yellow was later worn only by the imperial household); the red, the south; the white, the west; the north should have been black, but black was regarded as a bad omen so was substituted by blue.

S1. Flag of the Green Standards

The units of the Green Standards were so named after the large triangular standard carried, always made of green satin with a scalloped edge representing flames. Late in the period, some units reportedly flew green standards with a border of red satin, and possibly standards with yet other borders existed, too. A golden dragon was embroidered in the centre. The dragon in a flag flown by a Green Standards unit would normally have four claws, not five as in this reconstruction. The colour green was chosen in accordance with the symbolic background of the colours used by the banners. Green, that is, azure, symbolised the east, which signified the native Chinese soldiers.

S2-T. Standards of the Eight Banners during Grand Review

Details from a contemporary painting by the Qianlong emperor's court painter Xu Yang of the grand review of the army.

Appendix

Select Character Lists

bao	堡
baojia	保甲
baoyi	包衣
baoyi	包衣
baqi	八旗
bazong	把總
bingpai	兵牌
bingtun	兵屯
bujunying	步军營
canjiang	參將
canling	參領
changfu	常服
chaofu	朝服
chaopao	朝袍
chengshouyou/chengshouwei	城守尉
dajiangjun	大将军
dui	隊
dusi	都司
dutong	都统
ewai waiwei	额外外委
fangyu	防禦
fu dutong	副都统
fubing	府兵
fujiang	副将
hanjun	漢军
hongyipao (“red barbarian cannon”)	红夷砲

hongyipao ("red cloth cannon")	红衣砲
huang ma gua	黄馬褂
hujunying	護军營
huoqiying	火器營
jiangjun	将军
jianruiying	健鋭營
jifu	吉服
jiu han bing	舊漢兵
juntai	军台
lifanyuan	理藩院
lingcui	领催
lingshiwei neidachen	领侍衛内大臣
longpao	龍袍
lü ying	绿營
neidachen	内大臣
qianfengying	前鋒營
qianqingmen shiwei	乾清门侍衛
qianzong	千總
qinjun	親军
qinjunying	親军營
sanzhi dachen	散秩大臣
shangsanqi	上三旗
shiwei	侍衛
shoubei	守備
tai	臺
tianming	天命
tidu	提督
tongling	统领
tuanlian	團練
tuntian	屯田
waiwei	外委
waiwei bazong	外委把總
waiwei qianzong	外委千總
wang	王
xiangyong	鄉勇
xiaoqi	驍騎
xiaoqixiao	驍騎校

xiaoqiying	驍騎營
xieling	協领
yong	勇
youji	遊擊
yuqian dachen	御前大臣
yuqian shiwei	御前侍衛
zhen	鎮
zhufang	駐防
zongbing	總兵
zuoling	佐领

Further Reading

Although numerous academic works have been published on all aspects of Manchu history, culture, and language, none deals exclusively with the Manchu military system. Besides, when these works touch upon military affairs, they are more often than not somewhat vague on details and not always consistent in their translation and transliteration of military terms and description of military organisational structures.

To some extent, this reflects the availability of sources. While large quantities of Qing administrative documents in various languages have survived into the present, sources for our knowledge of the Qing armies before the mid-nineteenth century are few in number and frequently hard to interpret. These difficulties are amplified by the fact that the Western involvement in China during the nineteenth century left an abundant supply of easily accessible literary and pictorial sources for the organisation, tactics, uniforms, and appearance of the mid- to late nineteenth-century 'Chinese' armies. Here, the word 'Chinese' is used deliberately, as few Westerners then realised that they were dealing with a Manchu empire, of which China was merely the most important part. Western scholars therefore had to write the Qing into the history of China rather than the opposite, which would have been truer to reality. Considerably less information is available for the earlier centuries. The viewpoint of the Western observer is accordingly coloured by less than a third of the duration of Qing rule and the period when the Qing military was at its weakest level. From the mid-nineteenth century onwards, we have a vast number of Western texts, drawings, and eventually photographs.

Since serious attempts were then made to modernise and Westernise the Qing military, the earlier sources are significantly more important for an understanding of Qing organisation, armament, tactics, and practices during the Manchu period of expansion. The exceptions are a few cases where the nineteenth-century material explains matter but hinted at earlier although nonetheless proven as also present in previous centuries.

Chinese literary sources seldom deal with military matters in detail, and surviving military manuals are generally much older than the Manchu empire. Conservative Qing officials continued to use them, although we have seen that many Qing military officers and emperors realised that most were obsolete and advised caution. Very few military compendia were produced during the Qing period. We have the *Bingqian* ('Key to Martial Art') written by Lü Pan and Lu Cheng'en in 1675, discussing artillery and naval affairs. We also have the important illustrations showing, for instance, the use and disposition of artillery pieces in the field in the *Manzhou shilutu* ('Illustrated Veritable Records of the Manchu Empire') or *Taizu shilutu* ('Illustrated Veritable Records of the Great Ancestor [Nurgaci]'), annals known as '*Yargiyan kooli*' ('Veritable Records') in Manchu and first printed in 1636 and subsequently illustrated by Meng Yingzhao. These illustrations depict the deeds of Nurgaci, the founder of the Manchu state. The *Bingji zhizhang tushuo* ('Illustrated Explanations of Military Skills') of 1843 provides yet more information on Qing military practices. Although strictly speaking non-military, there is also the *Jian shu* ('Book of Spies') concluded by Zhu Fengjia in 1855, which deals with intelligence. Except these works, there is but little else.

As noted, the Qing empire had multiple official languages and issued most edicts and government statements in all of them. Manchu and Chinese were always employed and usually Mongolian as well. From the second half of the eighteenth century, many texts were simultaneously issued in Manchu, Chinese, Mongolian, Tibetan, and the Turkic language of many Central Asian Muslims written in Arabic script that is often referred to as 'Uighur'. However, military orders were issued exclusively, or at least exclusively with regard to what today would be called 'classified information', in Manchu. Unfortunately, it was often only the Chinese-language texts that were preserved and read by scholars, which means that many organisational aspects of the Qing military at present remain unclear. A study on the Qing military system based only on Chinese-language archive documents can be compared to the study of a modern-day army only through newspaper clippings. Still, information on military matters in Chinese include the codes of law such as the *Daqing huidian* ('Collected Statutes and Precedents of the Great Qing'). These codes provide some details on garrison strengths, military expenses, and the rules of seniority and promotion but little or nothing on tactics or strategy.

Some Qing period paintings and woodblock prints show military subjects, primarily processions, although these are chiefly concerned with the emperor and his imperial guardsmen. Fortunately, many are in colour. Few other military subjects are similarly treated, a consequence of the low social status of soldiers as compared to civil officials. To the Qing illustrations, we can add the important legacy of paintings and etchings by the Italian Jesuit and artist Giuseppe Castiglione (1688–1766), who worked in China from 1715 until his death.

Archaeology plays a small but important part in our understanding of the weapons, equipment, and uniforms of the Qing armies. A number of weapons, uniforms, and suits of armour can be found in museums and collections throughout the world, although most can be dated to the nineteenth century. Peter Dekker's *Mandarin Mansion* website (www.mandarinmansion.com) is full of useful information on Qing arms and armour and highly recommended.

Except for a few Russian sources, the various external enemies of the Qing before the nineteenth century have, to the best of my knowledge, left us with neither texts nor illustrative materials useful for our study.

With these caveats, the following select bibliography presents a variety of published works that are helpful for our understanding of the Manchu military system.

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